BOARD OF AGRICULTURE AND FISHERIES.

ANNUAL REPORT
OF
PROCEEDINGS
UNDER
THE SALMON AND FRESHWATER FISHERIES ACTS, &c., &c.,

FOR THE YEAR

1913.

Presented to both Houses of Parliament by Command of His Majesty.

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Board of Agriculture and Fisheries,
Fisheries Division,
43, Parliament Street, S.W.

2nd July, 1914.

SIR,

I HAVE the honour to submit the Report on Salmon and Freshwater Fisheries for the year 1913.

The Report differs somewhat from preceding Reports inasmuch as it does not merely give a bare record of the fishing of the season and related matters, but discusses at some length some of the more arresting topics connected with the salmon and freshwater fisheries. In some of the sections dealing with these topics views are indicated which, it is recognised, may not meet with universal acceptance. This was inevitable seeing that with regard to the subjects discussed opinions are divided and the evidence is incomplete. It must be understood that the writers of the Report have no wish to dogmatize, but rather to contribute to the discussion of matters of general interest.

The omission from the next Annual Report of a good deal of the material which appears in the Appendices to the present one is in contemplation.

I have the honour to be,
Sir,
Your obedient Servant,

HENRY G. MAURICE,
Assistant Secretary.

The Secretary,
Board of Agriculture and Fisheries.

(768—9.) Wt. 47018—52. 1000 & 90. 7/14. D & S. G. 17/ 6. a 2

ANNUAL REPORT FOR 1913.

SALMON FISHERIES.

THE FISHING SEASON OF 1913.

From the particulars given in the returns furnished by the various Boards of Conservators (Appendix I) it is possible to gather a general impression of the year's fishing.

Taken as a whole, the salmon fishing season was considerably below the average both for nets and for rods in the districts abutting on the west coast from the north down as far as the Teify, but in the remaining districts, notably in the South-west and North-east, the fishing showed considerable improvement on that of the preceding year.

Nearly all the rivers suffered largely from the drought during the summer months, and it was only at the beginning and at the end of the season that any considerable runs of fish took place. For the same reason the brown trout season was generally poor.

The following table shows the (estimated) catch of Salmon for the year 1913 from those districts which were able to furnish figures :—

CATCH of SALMON in certain DISTRICTS in 1913, as ESTIMATED by the respective BOARDS of CONSERVATORS.

District.	With Net.		With Rod.		Total.	
	No.	Wt.	No.	Wt.	No.	Wt.
		Lb.		Lb.		Lb.
Eden	—	—	700	11,200	700	11,200
Lune	1,009	11,333	38	454	1,047	11,787
Ribble...	430	5,200	—	—	430	5,200
Elwy and Clwyd	75	400	6	36	81	436
Conway	—	—	59	634	59	634
Seiont...	—	707	—	—	—	707
Ayron...	—	—	684	824	684	824
Teify	—	—	—	—	—	—
Usk	2,184	28,721	1,047	13,756	3,231	42,477
Wye	6,408	83,687	3,538	61,504	9,946	145,191
Severn	25,375	—	125	—	25,500	—
Dart	4,225	43,872	397	4,951	4,622	48,823
Teign	745	7,027	89	879	834	7,906
Exe	5,078	46,447	813	8,031	5,891	54,478
Frome...	173	2,657	110	1,660	283	4,317
Hampshire Rivers	1,466	—	585	—	2,051	—
Trent	9	108	—	—	9	108
Yorkshire	812	12,116	29	418	841	12,534
Esk (Yorks.)*	7,306	84,479	217	1,603	7,523	36,082
Wear	1,633	20,561	—	—	1,633	20,561
Tyne	16,293	264,057	—	—	16,293	264,057

* Inclusive of migratory trout.

These figures are again very incomplete, and very few of the Boards of Conservators issue printed reports supplementing the official returns. From such reports as have been issued, however, it has been possible to draw up the following general summary.

In the *Eden* District a very poor season was experienced, and this is reflected in the substantial decrease in the number of licences sold. The continued scarcity of sea trout is a matter which is causing grave local concern. More salmon, however, were seen spawning in the district than for many years past.

The results of the salmon netting on the *Lune* were good up to the end of June, but from that time onwards there was a large decrease in the number of fish caught. The rod fishing was very poor indeed owing to the low water. A 40 lb. fish taken in August was the heaviest recorded during the season.

The season on the *Dee* was of an average character, the early and late catches compensating for the drought experienced during the summer months. The rod catches were above the average. The largest fish caught by the nets was one of 40½ lbs. The heaviest taken with rod and line weighed 39 lbs.

On the *Usk* the salmon fishing was very good up to about the middle of June, and, although it fell off later, owing to the almost continuous drought, the season is regarded as having been fairly satisfactory on the whole.

Large fish of 48 lbs. and 44½ lbs. (unusually large for the Usk) were taken during the season, and one of 56 lbs. was reported as having been killed near Porton, probably by the propeller of a steamer.

On the *Wye* the results of the rod and line fishing constituted a record, viz., 3,538 fish, weighing 61,504¼ lbs. April, May and June supplied the biggest catches, both in number and in individual weight. Eighteen fish of 35 lbs. or over were landed during the season, the largest being 47¾ lbs. in weight. From June onwards, however, the drought seriously affected the fishing.

The number of salmon taken by the Wye Fisheries Association nets also showed a substantial increase over that of previous seasons, viz., 6,408 fish, weighing 83,686¾ lbs., as compared with 3,220 fish, weighing 41,272 lbs. in 1912. The average weight of these net-caught salmon (over 13 lbs.) is the highest since 1905.

The trout fishing was better than in 1912, but was also affected by the drought during the later summer months.

The results of the net fishing on the *Severn* showed a considerable increase over the preceding season, the estimated catch being 25,500 fish, as against 21,000 for 1912. The estimated average weight was about 14¾ lbs., or slightly less than in the previous year. Thirty salmon over 35 lbs. in weight were caught. Of these 16 weighed 40 lbs. or over, two of them being unusually heavy fish of 50 lbs. and 52½ lbs. respectively. The estimated catch by rod and line, never of very much account on the Severn, was only half that for 1912.

Owing, however, to the persistent and unusually high floods which characterized the early part of the season, a large proportion of fish succeeded in reaching the higher waters, and the pools in Shropshire and Montgomeryshire contained salmon in numbers not generally to be seen during the open season. This unusual abundance of salmon led to a resumption of netting in the upper waters, a fact which, in the interests of the river as a whole, is much to be regretted.

It is anticipated that the curtailment of the open season by two and a half months for that portion of the river which lies above Tewkesbury Weir will in future enable a greater proportion of fish to reach the higher waters earlier and more regularly. Fish in the Severn have to depend upon persistent high waters to accomplish the ascent of the numerous obstacles that separate them from the spawning grounds, and the object of the curtailment of the fishing season in the *inland* waters is to minimise the effect of these obstructions.

A noticeable feature of the year was the very large sum of money derived from the sale of rod and line licences for freshwater fish. No fewer than 24,145 of these were issued, realizing a sum of £1,010 12*s.* 6*d.* The great majority of these were issued in the Warwickshire, Worcestershire and Gloucestershire districts, at the rate of sixpence each.

On the *Exe* a very good season is reported as regards both the net and rod fishing. The revenue derived from the sale of salmon netting licences has only been exceeded in three previous seasons since 1889, and that from the sale of salmon rod licences in the same period on only one occasion.

The season in the *Hampshire Rivers* District was the best for many years, both for nets and for rods, and the number of fish seen ascending the rivers to spawn was exceptionally large. On the Avon in particular an exceedingly good season was experienced. The rivers benefited considerably by the good supply of water in the early part of the season. The largest fish was one of 46 lbs. caught by net at Knapp Mill on the Avon, and three of 40 lbs. were taken by the rods on the same river.

The *Yorkshire* District showed a distinct improvement so far as the net fishing was concerned. Not only was the total catch of salmon much bigger than that of the preceding year, but the average weight of the fish was about a pound more. No individual fish of great size was taken, the largest scaling only 28 lbs.

The results of the rod fishing, however, did not equal those of the previous season. The very dry summer, which aggravated the obstruction to ascending fish at the head of the tideway, is probably a sufficient explanation.

The net fishing in the Yorkshire *Esk* District showed considerable improvement on that of 1912 as regards the nets both in the river and at sea, 7,306 salmon and migratory trout being taken as compared with 4,849 in 1912. The average weight was about the same.

The rod fishing showed a considerable falling off, the number of salmon accounted for being somewhat less than half that of the preceding season.

A very satisfactory season was experienced on the *Tees*. There was a considerable increase in the catch of salmon, and the catch of migratory trout was more than doubled. The heaviest fish taken in the nets weighed 35½ lbs. and the average was just over 10 lbs. A big run of fish to the spawning beds is reported.

It is unfortunate that in the present state of the law it is practically impossible to get any satisfactory statistics of the take of salmon in England and Wales. The commercial value of our salmon fisheries is slowly coming into recognition, but it can never be thoroughly appreciated until it is possible to obtain more or less precise statistics of the quantity of fish taken and placed upon the market every year. Moreover, such statistics are essential as the basis of any complete scheme of scientific investigations of salmon. Through the assistance of Boards of Conservators and others it has been found possible to obtain fairly complete figures for certain districts, and it is hoped that by degrees such returns may become more readily available throughout the country.

Speaking generally it may be said that both net fishermen and the owners of rod fisheries are prone to be secretive as regards the number of fish taken in their waters or by their nets respectively. The latter as ratepayers may perhaps not unnaturally hesitate to furnish information which is liable to bring about an increase of the assessment of the value of their fisheries; the former are apprehensive of an increase of licence duties or of further restrictions of netting operations which they fear may follow from a complete revelation of the number of fish taken by that method. Thus it would appear that the longstanding conflict between public and private interests in salmon fisheries—a conflict based mainly upon misapprehensions of a character most difficult to remove—is a factor to be reckoned with not merely when new byelaws are under consideration, but also in the attempt to obtain statistical returns.

A summary of the new byelaws submitted to the Board in 1913 with an account of the Board's action in relation to them will be found on p. xxvi. One case in which the interests of contiguous districts and the respective interests of public and private fisheries were under consideration, deserves more than a passing notice.

In November of last year a public inquiry was held at Newport into objections which had been raised against certain bye-laws proposed by the Usk Board of Conservators, determining the length, size and description of nets, and the manner of using the same for taking salmon, and the area within which they might be used in the Usk Fishery District. The bye-laws, after full consideration of the circumstances, were confirmed—after having been modified in one respect—by the Board. The case was important because the interests of three separate districts, each possessing valuable salmon fisheries, were involved. It moreover raised a question of principle which may be said to be at the root of the whole subject of salmon fishery administration.

The most important of the bye-laws in question, and the one to which objections were taken, legalised the use of trammel nets for the capture of salmon in a certain portion of that part of the Severn Sea over which the Usk Board of Conservators have jurisdiction. The main point at issue was whether public salmon fishing should be encouraged in a part of the Severn Sea in which the public right of salmon fishing, although it had always existed, had not hitherto been exercised. Objections of a more direct and, in a sense, a more personal nature, as distinct from the objection on the point of general principle already indicated, were raised :—

(i.) by the owners of certain fixed engines in the common estuary of the Severn, Wye and Usk, who feared that the additional and new form of netting proposed would interfere with and diminish the takes of these fixed engines, and

(ii.) by the Severn and the Wye Boards of Conservators, on the grounds that this netting would intercept many fish which would otherwise be caught in their respective districts.

It is the policy of the Board to encourage the restriction of netting only where netting is likely to be prejudicial to the general interest of the salmon fisheries, and they came to the conclusion, after full consideration, that the operation of the byelaw was not likely to prejudice the general interests of the salmon fishermen of the Severn Sea or to operate unfairly against the interests of any individual or district.

PUBLIC AND PRIVATE INTERESTS IN SALMON FISHERIES.

In this connection it may perhaps be not inappropriate to draw attention to the fundamental rule that where the restriction of netting for salmon is under contemplation, the restriction should begin in the narrow non-tidal portions of rivers. The exercise by the public of a public right of salmon fishing in the wide waters of a large estuary, even though it may be carried to a degree which is perhaps excessive, is, provided close times and regulations as to mesh of nets and manner of fishing are observed, not in itself capable of as much mischief to the ultimate welfare of a salmon fishery as the regular exercise of private netting rights in the narrower and non-tidal portions of the river above. The soundness of the policy of stopping all netting for salmon in the rivers themselves, and of rigorously restricting it even in estuaries is recognised perhaps more widely now than in the past. In the Usk and in the Wye it has been possible to carry this policy into effect with results that are abundantly justifying it.

The powers of restricting netting in rivers conferred by the general Salmon Acts are not as complete as those which may be conferred by Provisional Orders, and in all cases the complete approval and co-operation of the riparian owners is essential. In some instances the private right of netting is valuable, and its cession involves a personal sacrifice which at the time may appear considerable. It is not surprising, therefore, that the universal recognition of what is the right policy in regard to netting takes some time to establish. It is also not difficult to understand that among the people who are responsible for the improvement, and who have in effecting it voluntarily suspended their rights, there should be some demur at the prospect that the greatest benefits resulting from that improvement should be reaped by individuals who have taken no part and who very seldom do take part in the efforts to bring it about. It is equally understandable—human nature being what it is—that claims to the practicable exercise of an existing public right should be put forward when that exercise shows prospects of profitable results.

Examples of all these different aspects of the question were furnished by the particular case under review.

On the Wye, the entire river is practically given up to rod fishing. There is no public right of fishing in any part of the district, and the small amount of netting which does take place is confined to the estuary, and is conducted not for profit, but to pay off certain charges incurred in obtaining the complete control of all the netting rights.

On the Usk there is a similar absence of netting in the river. A few fixed engines exist in the tidal portion, but these are strictly regulated and limited in number. Here, however, a public right of salmon fishing does exist, but owing to the fact that the suitable instrument was not legal in the district the right was not exercised to any considerable extent. The object of the byelaw above referred to was to afford facilities for the exercise of this public right.

On the Severn, rod fishing for salmon is the rare exception. There has always been strong opposition to the restriction of netting in the river itself, and cases of voluntary cession of private netting rights are few. It has often been urged that if less netting in the non-tidal portions took place, and therefore, more salmon were allowed to ascend to the upper waters earlier in the season, greater interest in the salmon fisheries of the Severn would be evinced on the part of many of the upper riparian owners. As a consequence these would probably make it their concern—rather more than is at present the case—that the protection afforded by statute to breeding fish and the young of salmon should be carried into the fullest effect, and that every facility should be afforded to ascending fish at all times to reach the upper waters. These waters are at present valued more for their trout than their salmon fisheries, and salmon and the young of salmon are, under existing circumstances, not always entirely welcome in them.

The administrative powers of Conservators and of the Central Authority are exerted essentially with a view to maintaining and developing the public salmon fisheries and preserving a natural source of food supply. Rod fishing, however, is a factor of the utmost importance in the development of a salmon river, for experience has repeatedly shown that it is primarily due to the angling interests that the stock of salmon in many rivers has been preserved from extinction, and in certain cases has been made to show a quite remarkable increase. The significance of the existence of such interests in any fishery district cannot be emphasized too strongly from the point of view of its direct effect upon the public salmon fisheries, which always derive the first and the principal benefit from any improvement. It is as unfortunate as it is ironical that the salmon angling riparian owners who have usually been responsible, in the first instance, for measures the effect of which has been to increase the supply of salmon, and therewith the prosperity of the public fisheries should commonly be regarded with distrust by the majority of the public net fishermen. It is difficult to convince the net fishermen that the interest of the riparian owners is identical with their own, and that the protection of salmon during the critical period of their life in fresh water is essential to the proper development and general welfare of salmon fisheries. It is hoped, however, that experience will remove the prejudice which assumes that the two chief groups of interests in a salmon fishery district must necessarily come into conflict with one another. Private owners naturally attach most importance to the sporting aspect of salmon fishing. It would be idle to suggest that their efforts to increase the quantity of salmon are always or wholly inspired by a desire to benefit the public fishermen. But an increased supply must invariably benefit the public fishermen in far greater degree than the private owners, who attach more importance to the fish which are to be caught by rod and line. It is particularly to be regretted, therefore, that the mutual character of the benefit is not more often brought into play as a means of bringing about a closer understanding and more cordial relations between these two groups whose interests are really identical. Unfortunately a prejudiced outlook is not always confined to those who fish for salmon as a livelihood, and an unreasonable idea that salmon are, or should be regarded entirely as creatures of sport, and scarcely to be caught by any means other than rod and line, too often still prevails amongst a certain number of those who fish for salmon as a diversion.

The Salmon Acts were not passed for the benefit of the private owners, nor are they administered primarily in the interests of sportsmen, as is not infrequently and somewhat bitterly asserted by netsmen who regard all measures restrictive of netting as directed expressly against themselves. The interests of sportsmen and fishermen alike demand an abundant and consistent supply of salmon. With a view to securing this supply, it is desirable that, so far as practicable, netting should be restricted to the sea or the wide waters of a large estuary, and that netting rights, whether private or public, in small rivers and in all non-tidal parts of every river should not be exercised.

POACHING.

In a Report which deals with the preservation and development of inland fisheries, some reference is almost unavoidable to the difficult topic of poaching—difficult because, while most people feel a certain degree of sympathy (probably not expressed) with one type of poacher, it is not easy to draw the line at which complaisance should end and rigorous measures of repression be employed. There is, however, one type of poaching which admits of neither palliation nor excuse, and should be dealt with with the utmost severity. The Statutes which were enacted for the better protection of salmon were at one time regarded by a considerable section of the community as unjustifiable restrictions upon the liberties of the nation and as having been passed for the special benefit of the wealthy and leisured few. In most districts a better understanding of the merits of the case now exists, and in few of them is poaching carried on on such a scale that the ordinary bailiff staff of Boards of Conservators cannot adequately cope with it. In some districts, however, the old tradition lingers, and poaching is carried on on such a scale by methods so iniquitous and malicious, and in circumstances so exasperating, that it demands to be regarded as a serious crime against society.

The greater part (some 95 per cent.) of the salmon taken in English waters are taken by nets, and of these, again, by far the greater proportion by fishermen exercising a public right, by means of which they earn their living, in tidal waters. It has already been pointed out that the success of the public fisheries depends upon the preservation of private waters above the tideway, and the interest of the public fisheries in the preservation of these waters is far greater than that of the riparian owners of fishing rights. Nevertheless, poaching of a malicious character sometimes occurs as the result of measures adopted by riparian owners to prevent the indiscriminate taking of salmon by people who have no legal right to do so, but who, because for a number of years they have not been interfered with, consider, or affect to consider, that they have established such a right. Such poaching not uncommonly takes the form of the mere wanton destruction of salmon, and this war of spite may be carried to such extremes as seriously to endanger the prospects of the salmon fisheries of the rivers concerned for some years to come. Poaching of this class is not of mere local significance, seeing that it affects the general stock of fish, and therefore reflects upon the prosperity of the public salmon fisheries which are an asset of the nation.

The worst kind of poaching is that which takes the form of organised raids upon the spawning beds and wholesale destruction of the spawning fish before they have had an opportunity of depositing and fertilizing the ova. In certain parts of the country this latter form of poaching was at one time very prevalent, and was no doubt largely an expression of defiance directed against law and order generally, and against the protective clauses of the Salmon Acts in particular. It is scarcely to be wondered at perhaps that the practice should have prevailed for some years after the Acts came into force, seeing that it was at one time a recognised kind of salmon fishing. "Burning the water," as it was termed, used to be looked upon as a form of sport, and was an annual event of some importance locally, receiving the support, and not infrequently the active co-operation of the fishery owners themselves. More enlightened opinion, however, very rightly determined that it was a senseless and wasteful practice, calculated to effect a serious depreciation in the value of the salmon fisheries throughout the country. Its effects are most serious and, although the practice has been arrested in the country generally, it is still, unfortunately, in certain parts, notably in Wales, and at certain times of the year, liable to occur.

Taking place as it does in wild and unfrequented country where communications are usually difficult, and receiving the open support of some of the inhabitants, and the passive toleration of the remainder, who are perhaps loth to invite persecution of their persons and damage to their property by appearing to discountenance it, this mischievous practice has always been difficult to deal with. Serious riots, involving bloodshed, have only too frequently resulted from endeavours to prevent it. Arming themselves with spears, which are used as weapons of offence as well as for the purpose of securing the fish, and sometimes blackening their faces to avoid recognition, these "Rebecca-ites," as they style themselves, muster on the river banks in large gangs, sometimes fifty or sixty strong. Their progress along the river is marked by the flare of torches, which serve the double purpose of ostentating their presence and of indicating the fish lying in the water.

It is a somewhat disquieting fact that when members of such gangs have been brought to trial difficulty has been experienced in some quarters in securing convictions or adequate punishments even where the evidence of guilt was overwhelming. The cases which, having been committed for trial at the Radnorshire assizes, were tried at Presteign in the winter of 1903 are instances of how gravely justice may miscarry when a breach of the Salmon Acts is in question. These were cases in which six water bailiffs, employed by the Wye Fishery Board to protect the breeding salmon during the close season, had been brutally assaulted by overwhelming numbers and badly injured—some of them so injured as to carry the effects for the rest of their lives. The accused—thirteen having been committed for trial—were all acquitted by the juries. The trials and the verdicts caused some considerable sensation, which was not confined to the locality, and the judge on circuit, Mr. Justice Phillimore, openly criticized the verdicts.

Raids of this character have occurred more recently in the Wye district. In one case during the autumn of 1912 the district water bailiff was informed of the intentions of the gang by an anonymous telegram, apparently sent by one of the leaders of the raid. He witnessed their proceedings but was powerless to intervene. Fortunately in this case the harm done was not serious, as the majority of the fish had already spawned and dropped down stream, but the case was not an isolated one, and in different circumstances the results might have been very serious. A force of bailiffs quite beyond the resources of any Board of Conservators to maintain would be necessary to deal with these gangs, and without the hearty co-operation of the constabulary, Boards of Conservators in whose districts such raids occur are powerless to repress them.

SCIENTIFIC INVESTIGATIONS.

Scale reading.

In 1913 the first volume of a new series of reports on Salmon and Freshwater Fisheries Research was published by the Board, the chief content being a report[*] by Dr. A. T. Masterman on Investigations upon the Salmon with special reference to age determination by study of scales. The material was obtained from the River Wye through the co-operation of the Wye Fisheries Association and the Wye Board of Conservators and consisted of statistics of the catches from the net fisheries as well as scale samples and particulars as to length, weight, &c., collected daily from April 15th onwards during 1911, from the salmon landed at Chepstow by the Association fishermen. In addition scales have been collected and observations made upon sexual maturity from salmon caught by special netting which was carried on during the close season.

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[*] Report on Investigations upon the Salmon with special reference to Age-determination by Study of Scales.

This material was used in order further to investigate the question whether, and if so to what extent the scales of the salmon can be used as an index of age. The scales of a salmon are normally retained throughout life and the amount of their growth corresponds to a considerable degree with that of the fish. The minute structure of a salmon scale shows a series of concentric ridges or thickenings which have the appearance of dark lines when the scale is seen under a microscope. The method of age determination by study of the scales is now fairly generally understood. The theory that the scale can be used as a fairly accurate gauge of the age of individual fish is based upon conclusions drawn from scientific investigations to the following effect. Rapid growth is accompanied by a widening of the interspaces between these ridges and when the fish (or the scale) is growing more slowly the ridges are more closely apposed. Such variations in growth are in general correlated with the warmer and colder periods of the year, the former producing more growth and the latter less; so that by counting the zones of widely spaced and closely spaced lines on the scale, the age of the fish from which it was taken should be determined by the practised observer. The early life of the salmon which is passed in the river before it descends to the sea as a smolt is also distinctly shown on the central portion of the scale, in which the ridges are formed much more closely together.

The report referred to infers from the data under review that the majority of young Wye salmon spend two years, and a small proportion three years, in the river before going to the sea as smolts. In the summer and to a less extent in the autumn of the following year a certain proportion return to the river to spawn. These constitute the grilse run. The majority of the fish, however, stay two winters in the sea, some three or even four. The following is the number and percentage of fish in the samples studied grouped according to their sojourn in the sea.

Winters in sea.	1.	2.	3.	4.
No.	85	677	125	5
Percentage	9·15	72·87	13·46	0·54

The above are fish which come up the river for the first time as mature fish. It is suggested that owing to the time of the year when netting commences, and possibly to the differential catching power of the nets, the higher age groups are here represented in smaller proportionate numbers than probably occur in nature. Besides these there were 37 fish whose scales indicated that they had previously spawned and had survived the kelt (spent) stage to return to their marine haunts and, after a period of feeding, undertake a further spawning migration. Of these 125 showed three winters in all spent in the sea, 5 showed four winters and one showed 2 winters of sea life.

During the process of the ripening of the reproductive organs the scales of a salmon suffer a process of deterioration of their substance at the edges and on the upper surface. The term "erosion" is proposed to describe this process. This erosion and the subsequent mending by fresh growth produce, in most cases if not in all, the "spawning mark" on the scale which enables one to make the distinction shown above between fish maturing for the first time and those which have spawned before. The report further suggests that this erosion occurs whilst the fish are still in the sea and is not therefore, as generally supposed, due to mechanical "fraying" in the river. Its occurrence is ascribed to the demands made upon the whole system by the developing reproductive organs.

A large predominance of males was found to occur in the grilse class. In the group a year older females predominated and among the older fish the proportions of the sexes appeared to be about equal. The older fish showed a distinct tendency to enter the river earlier in the season than the younger groups.

The report further discusses the question whether there is or is not a racial distinction between "spring" and "summer" fish. It is suggested that the distinction between "spring" and "summer" fish is based upon the physiological condition of "repletion" or fattening; that "spring" fish may reach this condition at the approach of any winter after the first spent in the sea and after this may enter the river at almost any month of the year; that "summer" fish feed and grow up to the time of their ascent to the river, which in the great majority of cases occurs in the summer months. Fish appeared to enter the river at all stages of sexual development but all fish in the samples taken after the beginning of August had well developed reproductive organs. The report also refers to the relation between age and size and discusses in detail the morphology of the salmon scale.

A study by Miss R. M. Lee, M.A., of the statistical returns of salmon caught by nets and rods respectively with a discussion of the condition of salmon as indicated by a co-efficient expressing relation between weight and length appears as an appendix to the report.

Another appendix consists of a paper by Miss A. M. Carr, B.Sc., upon observations of the scales and reproductive organs of samples of parr and smolts from the Wye and its tributaries the Ithon and Irfon.

The volume also contains a report* by Dr. Masterman upon the smelt (*Osmerus eperlanus*) to which reference has been made in the Annual Report on Sea Fisheries.

The study of data from the Wye salmon fishery has been continued during the past year, since continued observations are necessary to demonstrate how far the results shown in the first year's investigation represent the normal conditions.

Smolt Marking Experiments.

There still remain many problems to be elucidated in connection with the migration of salmon to their marine feeding grounds and their return to fresh water on attaining sexual maturity. By means of marking experiments attempts have been made and a measure of success achieved in the solution of these problems but, as in all cases of investigation involving the marking of fish, a large number of individuals must be labelled to ensure a significant number of recaptures and the work must be continued over a long period of time. In this country salmon marking investigations are still in their infancy.

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* Report on Investigations upon the Smelt (*Osmerus eperlanus*) with special reference to Age determination by Study of Scales and its bearing upon Sexual Maturity.

In 1911 smolts were captured in the Wye on their seaward migration and liberated after being marked by means of a loop of silver wire threaded through the base of the dorsal fin. In the following year smolts were again marked, gilt wire being used to distinguish the mark from that of the previous year. These marking experiments were carried out by the Board of Conservators for the River Wye.

Last spring a scheme for marking smolts was initiated in each of the three rivers Severn, Wye and Usk in connection with the Board's general programme of salmon investigation. Not only are the salmon fisheries in these rivers important in themselves but a special interest attaches to such an experiment in these three rivers because they flow into a common estuary. Returning salmon must, therefore, traverse a common "highway" from the sea. From the results of marking experiments one may determine among other things to what extent salmon return to spawn in the river in which they were bred.

On the river Wye the work of smolt marking was commenced on 31st March and continued through the months of April and May, the fish being taken by means of drafts with a fine mesh net at Bigsweir (St. Briavels). The operations were carried out under the supervision of the Board of Agriculture and Fisheries by members of the staff of the Wye Board of Conservators and special employees. On the river Usk the operations were carried on from 7th April to 30th May in the neighbourhood of Newbridge, and on the Severn from 21st April to 24th May just below Gloucester, the actual marking in each of these two rivers being performed by an officer of the Board. In every case the work was seriously hindered by the flooded condition of the rivers caused by the unusually heavy rainfall which persisted from the middle of April to the middle of May, the time when the smolt run was apparently at its height. Consequently the numbers of smolts captured fell far short of the minimum necessary to constitute a successful marking experiment. The numbers marked in the Wye, Usk and Severn were respectively 445, 249 and 215.

The labels used for marking consisted of a small disc of oxydised silver attached to a loop of silver wire which was threaded through the base of the dorsal fin. The river in which they were liberated was indicated by a distinctive letter stamped on the disc and the month in which the marking was done was shown by the method of attachment to the wire, for which purpose the discs were made with four perforations.

Smolt marking has also been carried out on the River Lune for the past two years. In the year 1913 700 smolts were marked at Forge Weir by officers of the Lune Board of Conservators.

Recapture of Marked Fish.

The earliest possible date by which recaptures of any of the fish marked as smolts during the year 1913 may be expected is in the summer of 1914.

A smolt marked by the Lune Board of Conservators in April, 1912, was recaptured as a grilse of 3¼ lbs. in the estuary of the Lune on the 10th of July, 1913. Other recaptures of marked fish which have been notified in the year 1913 are as follows:—

A sea-trout ("Bull-trout") kelt marked at Warkworth Dam on the River Coquet on the 24th of April, 1912, was recaptured as a kelt on the 25th of March in the following year in the same river at Felton. In the intervening 334 days it had increased in length from 21½ to 23½ inches. Its weight at the time of marking was 2½ lbs. and at recapture 4 lbs. 6 ozs.

A kelt marked under the auspices of the Yorkshire Anglers' Association at Corby on the River Eden on the 26th of March, 1912, was caught in a net in the same river on the 8th of June in the following year and consigned to Billingsgate market where the label was first observed. Its weight at the time of marking was estimated at between 8 and 12 lbs. On its second capture, as a clean fish, it weighed 21½ lbs.

A female salmon of 24 lbs. bearing a label marked W. 2649 was caught at Corbridge on Tyne on the 24th of October. The label was one which had been issued to a private individual and unfortunately no record had been kept of its attachment so that the return affords no information of value at any rate as regards the habits of the salmon. Indeed it may be said that the indiscriminate marking of salmon of which no satisfactory record is taken is a source rather of embarrassment than of assistance to those engaged in scientific investigations. Fish so marked (or the label used) may be sent to the Board and much time and trouble lost in fruitless inquiries. The Board are glad to avail themselves of the assistance of persons interested for getting records of the movements and growth of salmon; but it is absolutely necessary, if such assistance is to be effectively given, that a full record of the time and place of marking with particulars as to the condition of the marked fish and the label used should, in every case, be transmitted without delay to the Board. No stamp is necessary on letters conveying such information, which should be addressed to "The Secretary."

Disease.

Relatively little disease has been reported among the more important freshwater fishes, apart from the usual and normal occurrence of fungus and mortality among fish following the spawning period.

Furunculosis appeared in the Teign and Exe in May and early June, and appears to have been the cause of some mortality among trout, peal and salmon, but the disease appeared to die out by the end of the latter month. In view of the abnormally dry summer of 1913, it is perhaps a matter for some surprise that there were no outbreaks of the epidemic such as occurred in 1911. The lower temperatures which prevailed through last summer may perhaps account for the maintenance of healthier conditions.

SALMON HATCHERIES.

The mere fact that there exists a difference of opinion as to the economic value of artificial salmon hatching and that in the absence of satisfactory evidence unbiassed judges are inclined to refrain from forming a conclusion either for or against, indicates the desirability of subjecting the output of an artificial salmon culture establishment to a practical test based on scientific principles and carried out in a thorough-going manner. If such a test could be applied, it would be of great practical value besides incidentally adding to our knowledge of the biology of the species. The conditions necessary for the successful carrying out of such an experiment are—

(1) a well equipped and properly managed hatchery,
(2) facilities for isolating and observing the fry, preferably up to the smolt stage at which period they should be suitably marked,
(3) reliable observations and statistics of not only the descending smolts but also the ascending adults,
(4) special biological observations by means of scale examination, &c.

Completely to satisfy these conditions involves the control or at any rate the surveillance of a stream capable of carrying salmon fry and adult fish. This might be difficult but should be by no means an impossible matter, and in view of the important practical questions involved would seem to be worth a considerable capital expenditure. If the result proved the profitable nature of hatchery operations the expenditure would be justified and if the economic unsoundness of the practice was demonstrated it would serve to prevent further waste of resources through ignorance. Of course the practical questions involved are by no means simple or easy to investigate, but the above appears to be the only way in which this important problem can be solved.

The question of the value of salmon hatcheries as a means of maintaining the supply of salmon in a salmon river has, from time to time, given rise to much discussion, and calls for special consideration at the present moment because some of the applications made by Boards of Conservators for grants from the Development Fund have included proposals for expenditure on this object.

It is important that a clear distinction should be drawn between the different purposes at which artificial propagation of salmon may aim.

The object of a hatchery as most commonly advocated is to prevent the waste of ova assumed to occur naturally even under favourable conditions, and particularly when such waste is intensified as the result either of insufficiency of spawning beds, or of the inability of fish to reach the spawning beds in sufficient numbers or at the right time, or of depredations by enemies of various kinds, or of the deposit of unimpregnated eggs, due to disproportion of the sexes. Artificial hatching is also advocated with a view to the protection not merely of the ova but of the fry, by extending the operations from "hatching" to "rearing." Although opening up entirely different considerations, these two purposes may be classed together as the same, viz.: the elimination of the "wasteful" methods of Nature.

A distinct object of artificial breeding is the introduction of salmon into waters (*a*) which do not contain these fish naturally, or (*b*) in which the natural stock has been practically exterminated.

A third object is to improve the breed of the native fish by introducing fresh blood.

The fourth purpose is mainly scientific, *e.g.*, to facilitate the study of the life history of the fish, the influence of parentage upon the fry, the effect of the quality and quantity of the feeding in early life, the conditions under which migration takes place and their effect upon the subsequent development and rate of growth in the sea, and questions of a similar nature.

The above-mentioned objects are quite distinct, and involve different methods, and must be considered from separate points of view. It does not detract from the intrinsic value of the rest to say that, from an administrative and a popular point of view, the first is the most important. The question to be answered is whether experience supports the belief that salmon hatcheries have produced the beneficial results attributed to them. In attempting to arrive at a satisfactory answer to this question, extreme caution must be exercised in ascertaining how far the facts which are adduced in support of a claim that the establishment of a salmon hatchery has led to improvement in the catch of fish in any river are due, wholly or in part, to other causes.

So far as this country is concerned, no convincing evidence is available to show that the increase or even the maintenance of the stock of salmon in any river can be attributed without doubt solely, or even mainly, to a hatchery. Such evidence cannot be produced in the absence of reasonably accurate statistics of the annual catch of salmon in any river or district over a long period both before and after the establishment of a hatchery. Generally speaking, such figures as are available are based on the statements of local observers, who are not always absolutely reliable, and at best the returns are bare records of "catch," and take no account of the circumstances which may have brought about any increase in the quantity of fish caught.

The advocates of salmon hatcheries generally urge, as a sufficient reason for their establishment, that the enormous "waste" of eggs or of fry which occurs under natural circumstances can, by this means, be obviated. It is, however, by no means certain that waste does occur in Nature as a matter of course to such an extent as is often alleged. It is doubtful whether this question of fact could be answered with certainty, even after extensive and exhaustive investigation, and it is far from certain that such waste as must necessarily occur in Nature is avoided by the adoption of artificial methods.

There is a point in the life of the fry at which, other things being equal, the chances of survival of all of them are the same. They must all go down to the sea whether they have been hatched in a box or on a natural gravel bed, whether they have been left to fend for themselves from the beginning or have been "reared"—no matter to what stage. They must all face the dangers of migration to the sea as smolts and it cannot be suggested that, at this stage, the individual hatchery-reared smolt has any advantage over his naturally bred fellows. Any avoidance of "waste" therefore must take place in the pre-smolt stages, either among the eggs, or among the newly hatched fry, or among the fish after they have assumed the form of perfect fish and have become "parr." There are "natural" losses even in the most carefully tended rearing boxes or ponds; and the longer the fish are kept there as parr the greater the doubt whether the survivors are not becoming less and less fitted to face the risks which will confront them on their liberation into an open stream. The shorter the period during which they are "nursed" the less the divergence between the "natural" and the "artificial" conditions. If one may assume that the artificially reared smolt is less hardy than the naturally reared it would appear that the opportunity to prevent "waste" must be sought at the egg stage. It is doubtful whether even the most elaborate and prolonged experiments and observations would show what proportion of the eggs deposited by a female salmon either are unfertilised or are destroyed before hatching; but, however low we may reckon the percentage of fry to eggs, there is evidence to show that, given favourable natural conditions, it is more than sufficient to keep up the stock. It is easy, on the other hand, to show that 100 per cent. of the eggs "stripped" from a female salmon may be fertilised artificially, and that a very high, though smaller, percentage may be "batched." From this point the comparison between the results of natural and of artificial processes is a matter of circumstances and of guess-work. But, if the assumptions most favourable to artificial methods be accepted, the following important considerations have to be taken into account. Firstly, only a small percentage of the fish which would breed naturally in a given stream can be dealt with in a hatchery. Secondly, it is, in practice, impossible to "strip" artificially from any female fish the whole of the ova which she would deposit naturally. Apart, therefore, from any of the other complicated factors in the case, the question must arise at the outset—"What is the difference between the number of eggs which can be placed into the hatchery by man and the number which Nature would place in the river?" (The possibility of a hatchery destined to stock a barren river does not enter into the argument, which deals solely with the question of artificial breeding as a means of maintaining the stock of fish in a salmon river.) If this question is not answered satisfactorily in favour of artificial methods, it is of course unnecessary to follow up the other question of "waste." But, assuming that both answers are in favour of artificial hatching in the abstract, the important and practical consideration of cost has to be dealt with. Is the gain commensurate with the cost of artificial methods as contrasted with that of protecting the fish when left to breed naturally? In other words, assuming that it is possible under the best conditions to increase the natural supply of salmon in a river by artificial batching, may there not be other more effective and more economical means of attaining the same object? The answer to this question may of course be different in the case of different rivers.

Artificial hatching and rearing, conducted on a scale adequate to the purpose in view, must involve considerable expense in works, b 2 maintenance, labour, and supervision. Moreover, the site must be suitable. If it is intended to rear the fry to the smolt stage, the area must be extensive and not far above the tideway. It must have a regular supply of water under special conditions, in which natural food for the fry must be abundant if the evils of artificial feeding—which can seldom be entirely dispensed with—are to be avoided. A "farm" fulfilling these conditions will be a long way from the ordinary source of supply of the spawning fish from which the eggs are taken. If, on the other hand, the hatchery is near the spawning beds, and the fish, instead of being reared to the two-year-old stage, or more, are liberated shortly after hatching, the cost will be less, but the claim that the fry are protected from natural "waste" is weakened. In any event, there must be an uninterrupted and steady supply of water of the right kind and at the proper temperature for the hatching boxes alone. Assuming all requirements to be fulfilled, it has yet to be shown that better results are not attained, at less cost, by aiding the fish to fulfil their natural instincts, by facilitating their access to the spawning beds, and by otherwise encouraging breeding under natural conditions.

In England and Wales there is no case in which a hatchery has been established on a river in which the conditions in that river have not, at the same time, been materially affected by one or more of such circumstances as the better regulation of the fisheries, the construction of fish-passes, the reduction of pollution, the repression of poaching, or other like improvements. As an illustration, it may be useful to consider in some detail the case of the Tamar and Plym Fishery District. The principal rivers in this district are the Tamar and the Tavy, which merge into a common estuary. It is beyond question that considerable improvement in the salmon fisheries of these two rivers has taken place in recent years. The improvement is to be seen not only in an increased quantity of salmon, but in the fact that the fish are more evenly distributed during the open season. It is stated, moreover, that the fish are superior in shape and colour to those formerly caught—the improvement in this respect having been first noticed, apparently, in 1908.

The improvement in numbers was first noticed in 1902, and in 1904 an unusually early run of salmon is said to have been first remarked. In every succeeding year the fish are said to have come up earlier and in progressively increasing numbers, until eventually clean run salmon were observed in the fresh waters of the Tamar in February. It is stated that, previously to 1900, the salmon in the Tamar were late summer fish and did not arrive in fresh water till August, the fish not taking the river till the middle of October. In 1908 the improvement which had already been observed in the Tamar appears to have been shared with the sister river the Tavy. As a natural result of the increased quantity of fish, there has been a considerable increase in the number of net licences issued to fishermen in the estuary.

In the year 1899, a salmon hatchery was established by the Duke of Bedford at Endsleigh, just above the great dam at Latchley which marks the limit of tidal flow in the Tamar. The first hatch of fry from this hatchery, 24,000 in number and reared up to the age of 15 months, were liberated into the Tamar in the summer of 1901. Annually during the period from 1902 to 1906 inclusive, fry, varying in age from a few months to about a year, were turned out into the Tamar in quantities varying from 45,000 to 320,000, the total during the whole period amounting to appreciably over a million. Except in 1902, when a supply was obtained from the earl of Denbigh's hatchery in Wales, and again in 1906, when some eggs were taken direct from Tamar fish, all the ova hatched were from salmon taken in the North of Scotland.

Previously to their liberation, large numbers of the fry from the hatchery were marked in various ways.

In 1901 the 24,000 15-months-old fry were all marked by removal of the adipose fin.

In 1902—besides 191,700 unmarked—36,700 yearlings were marked by the removal of half the adipose fin.

In 1903 no fry were marked but 83,000 were liberated at 5 months, and 50,000 at 9 months.

In 1904, 30,000 fry were marked in the same way as those of 1901, viz., by the removal of the entire adipose fin. Before being liberated, these, together with 15,000 unmarked fry, were placed in a pond, which, when eventually emptied, however, was found to contain only 15,000 fry. It is supposed that the rest of the fry originally put there had already made their escape into the river on the occasion of an exceptionally big flood which affected the pond in question. It is assumed, at all events, that the majority of the marked fry found their way into the river.

In 1905, out of 294,650 yearlings liberated, 85,448 were marked by splitting the adipose fin.

In 1906, 220,000 yearlings were liberated, of which 24,000 were marked by cutting off the whole of the adipose fin, and 100,000 six-months-old, were liberated unmarked.

In all, rather more than 200,000 fry were marked by cutting off the adipose fin or mutilating it in some way.

Although very commonly practised, the method of marking young salmon by removal or mutilation of the adipose fin is unsatisfactory; if, only because similar mutilation may occur by accident. In any case it does not afford indisputable evidence that a particular fish belonged to a particular batch so marked. The element of doubt thus produced will be observed in the following records:—

In August, 1902, a 2½ lb. grilse, and three or four others up to 4 lbs. in weight, were caught (it is assumed in the estuary), with the adipose fin missing. One 4 lb. grilse was also secured in the Tavy with the adipose fin missing. In 1903, 11 salmon weighing from 6 lbs. to 9½ lbs. each, and with the adipose fin missing, were caught by the nets near Saltash. In addition, three such fish were caught in the Tavy, weighing respectively 8½ lbs., 8½ lbs., and 9 lbs. In 1904, three salmon similarly mutilated were caught, weighing 8 lbs., 12½ lbs., and 16 lbs. respectively. Three other similarly marked fish are said to have been caught in the Tavy, but no particulars are available. In 1905, three salmon with half the adipose fin removed were caught, but there are no particulars of their size. One salmon weighing 22 lbs. with the entire adipose fin removed, was taken during the same year in the Plym.

In 1906, one salmon of 10½ lbs. with part of the adipose fin removed, and one of 11½ lbs. with all the adipose fin removed, were caught. In 1907, two salmon, of 8 lbs. and 10½ lbs. in weight respectively, with a V-shaped cut in the adipose fin (assumed to indicate the method of marking adopted in 1905) and one of 9 lbs. with the entire adipose fin removed were caught.

Thus, out of a total of over 200,000 marked fish, records exist of the recapture of approximately thirty-four, *i.e.*, less than ·02 per cent.

It is possible that the method of marking adopted was partly responsible for the fact of so small a percentage of recaptures being recorded, owing to the inconspicuous nature of the mark and to the fact that, even when observed, it may have been mistaken for an injury unintentionally inflicted. Against this may be set the converse possibility of a fish so injured being mistaken for one of those purposely marked.

It is much to be regretted that some more distinctive method of marking was not adopted, for here was an excellent opportunity of following up the results of an experiment to a satisfactory conclusion, with, incidentally, the possibility of anticipating the discovery of valuable facts in the life history of salmon which occurred a little later as a result of experiments conducted in Scotland.

The great disproportion between the number of salmon fry marked and the number of marked fish recorded as having been recaptured may no doubt be accounted for partly by the assumption that the latter formed only a small percentage of the number of marked fish actually recaught, the rest having escaped observation. If, however, we multiply the recorded recaptures—viz., 34—by as much as ten, this would give only 340 fish out of 200,000 reared to various stages of growth, as above specified. It is necessary, therefore, to consider what other circumstances, if any, may have helped to bring about the improvement in the quantity of fish observed in the rivers, the more so as this improvement was first observed in 1902 and the first fish from the hatchery—numbering 24,000—were not liberated till 1901. It is true that 1902 was the year in which the first lot of fish without adipose fin—five in number—were taken; but it was not till 1903 that any considerable number of such fish were caught, the aggregate for that year being fourteen. The corresponding record for 1904 was six, for 1905 it was four, for 1906 two, and for 1907 three.

On the other hand the salmon in the Tamar appear to have improved not only in numbers and in condition, colour and shape, but also in respect of the early period of the year at which they came into the river. The improvement in this last respect is said to have been first observed in 1904, or one year later than that in which the bulk of the first batch of fry of Scotch origin, liberated in 1901, made, as shown above, their first return from the sea. It is, however, to be observed that the improvement in condition, colour, and shape was not confined to the marked fish, but extended to the general run of salmon in the river; and this improvement may very well be due, not to heredity, or racial differences, but to the simple fact that these "improved" fish were fish taken earlier in the season than those of previous years with which they were compared. This would be in accord with universal experience, even in rivers where no attempts at artificial hatching have ever been made, that "early" fish are always superior in colour and contour to those which arrive later.

In this connection two remarkable facts come to light as a result of a study of the foregoing returns. In the first place 1903, and not 1904, was the year in which the greatest number of marked fish were recaptured; and in the second place the average weight of the marked fish recorded as having been recaptured in 1904 was greater than that of the corresponding recaptures in 1902–3—a fact which indicates that their average age had increased. Direct observations on this point in other rivers show that it is apparently the older fish which come up earliest, and the earlier run observed in 1904 may, therefore, have been due simply to the greater age of the fish, and not to any racial characteristics. It is to be remarked that the heaviest marked fish (one with adipose fin entirely removed) weighing 22 lbs. was caught in 1905.

It is to be inferred that the improved quality and the earlier appearance, of the fish were observed not merely in the small number of marked fish recaptured, but also in the general run of fish in the river. The fact is not overlooked that the total number of unmarked fish, artificially reared and liberated was considerably greater than the number of marked fish, but it is obvious that the general run of fish in the river in 1904 cannot have been influenced by the "new blood" first imported only three years previously, the produce of which had not yet had an opportunity of reproduction. It, therefore, becomes necessary to consider other possible explanations of these phenomena.

Previously to 1900, in addition to the public right of netting for salmon in the estuary, a private right of fishing had been exercised at a fishing-mill-dam at Calstock, about 10 miles above Saltash, and situated in a narrow part of the tideway. An approved fish pass had been constructed at this dam in 1889, but the good effects of this were discounted by the exercise of netting rights above that point, and by the existence of an almost insurmountable obstruction some four miles higher up, viz., the weir at Latchley. Latchley Weir was unprovided with a fish pass, or, at all events, with a fish pass which served any useful purpose until the year 1900, when one was built by the Duke of Bedford at his own expense, from a design furnished by one of the Inspectors of Fisheries. About the same time the netting rights at Calstock were taken on lease by the Duke of Bedford, who has not since exercised them.

The immediate effect of simultaneously removing the nets at and above Calstock, and of making an effective salmon ladder in the weir at Latchley, was to permit fish to reach the higher waters both in larger numbers and earlier in the season. A connection between the removal of these obstructions in the year 1900 and the improvement in the run of fish which was first noticed in 1904 is no less probable than a connection between that improvement in the run of fish and the liberation of the first batch of smolts from the hatchery at Endsleigh in 1901.

It is improbable that an increased or earlier or improved run of fish attributable to the hatchery would have been observed above

Latchley Weir if the fish pass there had not been constructed; and it must not be overlooked that the observation of the unusually early appearance of salmon in the Tamar in 1904 refers to the fresh waters of the river. But, in addition to the important work at Latchley, fish passes have been provided on certain tributaries of the Tamar, *e.g.*, at Werrington Park and Yeolm Bridge Weirs on the Attery, and at Spry Mill on the Lyd. Their construction would have been of small avail without the removal of the obstructions lower down, but the combined effect of these works was to make a large area of spawning ground more accessible to breeding fish.

Some of the fry—aggregating over a million in five years, or about 200,000 a year—artificially reared at Endsleigh did, undoubtedly, return to the river, and some of them have, no doubt, bred there. But what ratio any share which the hatchery has had in the improvement in the fisheries of the Tamar bears to its cost, is a question which can never be answered. Seeing, however, that results exactly similar to those observed in the Tamar have been observed in rivers where artificial hatching has never been practised, but where fish-passes have been built, and netting restricted in narrow waters, the case of the Tamar can hardly be regarded as affording undoubted evidence of the advantages of artificial hatching as a means of improving the stock of fish in a river.

The facts that the Tavy has shared in the improvement in the Tamar, and that recaptures of fish marked at the hatchery have been made in that river, do not affect this general conclusion. Improvement in one river is commonly followed by improvement in a contiguous river, especially where (as is the case here) they fall into a common estuary. The Tamar is, and always has been the more important river of the two, and for that reason more direct efforts have been made to improve it than in the case of the Tavy, where the conditions have remained practically constant since the improved fish-pass was erected at Tavistock in 1891. The topographical conditions are such that the "lead" for the fish into the Tavy is much less attractive than into the Tamar. In many other respects the two rivers are not comparable, and the fact that an improved fish-pass at Tavistock did not at once result in a marked improvement in the stock of fish in the Tavy, does not exclude the probability of such a result in the case of the Tamar from the construction of a fish-pass at Latchley.

A careful review of all the circumstances of the case of the Tamar and Tavy leads to the following conclusions:—

1. That the improvement in the condition of the local salmon fisheries coincides more nearly with the removal of obstructions than with the establishment of the hatchery.
2. That that improvement cannot with certainty be attributable to artificial hatching.
3. That the improvement which can be brought about by measures other than artificial hatching will be maintained naturally when those measures have been taken, whereas artificial hatching, if relied upon as the only means of improvement, would have to be carried on permanently.

These conclusions, however, must not be regarded as involving a condemnation of artificial methods of salmon hatching and rearing for all purposes. On the contrary, there are many problems connected with salmon fishery administration in the solution of which a hatchery, with suitable appliances, in a well-selected site, and conducted on lines calculated to throw light on those problems, would be of the greatest practical benefit. Moreover, it must not be forgotten that special circumstances may exist in a particular district which may render the interception and stripping of fish at a suitable point, and the hatching of their own ova and the "rearing" of the fry to a suitable stage in suitable localities, a desirable measure of protection. For instance, in a case where the district includes extensive spawning beds in out-of-the-way areas which can only be effectively watched and preserved at great expense, there is much to be said in favour of such a course. As a general rule, however, it is doubtful whether the advantages of artificial propagation as a means of maintaining the stock of fish in a river are comparable with those attending the removal of obstacles to the propagation of the species under favourable natural conditions.

Besides the general question of quantitative stocking there are other points of perhaps equal significance which can only be investigated by means of a hatchery and by properly conducted observation of the output of fry. For instance there is a great deal to be done in the investigation of the effect of various hereditary factors in fish breeding. The characters of the progeny of parent fish of different ages, of different "runs" of salmon (spring, summer or winter running fish), the relation between the size of the ova and the resultant fry, the observation of the effect of environment on ova and young fry and on the food supply during the early stages all afford material for scientific investigation from which results of practical significance might safely be anticipated, irrespective of the question of the direct effects of artificial breeding as a means of keeping up the stock.

LOCAL MATTERS.

Fish-passes.

In the *Eden* District the fish pass at Lyvennet Mill Dam, plans for which were approved late in 1912, was completed during the summer of 1913.

The *Derwent* Board of Conservators have constructed, with the consent of the owners, unapproved fish-passes at Castle Weir and Fitz Weir, Cockermouth.

In the *Lune* District the old fish-pass at Halton Weir has undergone extensive alteration and improvement, but some slight further alterations will be needed before it is completely satisfactory.

The improvement of the old pass at Forge Weir, and certain works for facilitating the descent of smolts and preventing their ingress into the mill leat have been postponed by the Conservators owing to lack of funds.

The fish pass at Burton Weir on the Greta, originally built in 1910, but shortly afterwards damaged by floods, has been repaired.

On the *Dee* a fish pass over Chester Weir has been constructed by the Board of Conservators at considerable cost. In connection with the Electric Power Works at Chester Weir, a grating has been erected by the Chester Corporation, who own the works, for the purpose, *inter alia*, of preventing fish from passing into the turbines. This grating is not sufficiently fine to prevent the descent of smolts, and for the satisfaction of the Dee Board of Conservators the Corporation have undertaken, during the smolt season, to cover it with fine wire netting. As, however, the turbines to be used at the Power Works are of an unusually large pattern, it has been suggested that smolts may be able to pass through them without injury, and observations are to be made with a view to testing this possibility.

In the *Elwy and Clwyd* District, Llanfairtalhaiarn Weir, on the Elwy, which was destroyed by floods in 1912, was rebuilt in 1913. Plans have been approved for a fish pass, to be constructed as soon as opportunity permits.

Byelaws and Licence Scales.

In the *Derwent* District a variation of the scale of licence duties for fishing for freshwater fish with rod and line has been approved, and is now in force during the present season.

For the *Dee* District byelaws have been approved altering the date of the commencement of the close season, and the period during which it is lawful to use a gaff in connection with a rod and line.

In the *Seiont* District, byelaws have been confirmed (1) regulating netting for fish other than salmon during the close season, (2) prohibiting netting near the mouths of the rivers Seiont and Llyfni, and (3) altering the close season for trout.

In the *Usk* District, regulations have been approved whereby the use of trammel nets of a limited size will be permitted outside a line drawn across the mouth of the river at the limit of the Newport Harbour Board's Jurisdiction.

For the *Wye* District a byelaw was passed limiting the period of years during which it shall be lawful to use tuck nets of more than 100 yards in length in certain portions of the district.

For the *Severn* District a byelaw has been approved—to which allusion has already been made—for altering the annual close season for salmon above Tewkesbury Weir, so that it shall be from the 1st June to the 1st February following, both days inclusive.

In the *Avon, Brue, and Parrett* District a byelaw prohibiting the use of instruments for catching freshwater fish except a rod and line, and a fixed net for taking eels, has been confirmed.

Byelaws establishing a close season for freshwater fish, and altering the close season for trout in the *Norfolk* District were approved.

A byelaw made by the Board of Conservators of the *Esk* Fishery District re-defining the limits of the "playground" at the mouth of the Esk has been confirmed.

Provisional Orders.

During the year a Bill for the confirmation of a Provisional Order under the Salmon and Freshwater Fisheries Act, 1907, for the Ribble Fishery District received the Royal Assent. The re-constituted Board of Conservators came into office on January 1st, 1914.

Applications for Provisional Orders have been received from the Conservators of the Dee and of the Conway Districts. In the former case an Order has been made, and the Bill for its confirmation is before Parliament as this Report goes to press. In the latter case, the application has been duly advertised, and a Local Inquiry will be held in due course.

Applications for Grants from the Development Fund.

Several applications by Salmon Fishery Boards for grants from the Development Fund have been referred to the Board for report, in accordance with the Development Fund Act, and the Commissioners have recommended the following grants in the cases of the Dee, Tamar and Plym, and Lune Fishery Districts:—

To the Dee Fishery Board, a grant not exceeding £100 towards the enlargement and improvement of the Salmon Hatchery at Trevor; the sum of £50 annually for a period not exceeding three years for experiments in the improvement of the breed of fish; and a sum not exceeding £500 for fish passes and other works for the development and improvement of the salmon fisheries:

To the Tamar and Plym Fishery Board, a grant not exceeding £250 for the construction and improvement of fish passes:

To the Lune Board of Conservators a sum not exceeding £250 for similar work, and £25 for smolt marking experiments.

In each case the Commissioners laid it down as a condition that the Board of Agriculture and Fisheries should exercise a general supervision over the expenditure of the grant; and, in the cases of the Lune and the Tamar and Plym, the further condition is imposed that a sum equal to the amount of the grant should be raised locally.

MISCELLANEOUS MATTERS OF GENERAL INTEREST.

Salmon received at Billingsgate.

The Fishmongers Company have been good enough to furnish the following Return of the quantity of salmon received at Billingsgate Market during the last ten years:—

RETURN of BOXES of SALMON RECEIVED at BILLINGSGATE, 1904 to 1913.

(*Prepared by the Fishmongers Company.*)

Year	English, including Berwick	Scotch.	Irish	Dutch.	Norwegian.	Danish.	French	German.	Canadian.	Siberian.	Total Boxes.
1904	3,177	14,753	6,538	852	1,126	44	7	—	275	—	26 284
1905	3,394	14,868	6,979	279	1,232	15	11	—	329	—	25,807
1906	2,560	13,282	7,100	327	1,805	5	16	—	890	—	24,994
1907	3,419	11,147	5,543	402	1,859	3	9	—	541	—	22,922
1908	3,748	11,076	6,661	363	1,569	3	19	10	376	—	23,816
1909	4,096	12,909	9,309	91	826	—	5	1	416	352	27,997
1910	4,414	10 900	7,570	165	1,206	17	7	—	573	523	25,364
1911	5,059	13,256	9,472	255	939	10	30	9	347	305	30,282
1912	4,332	11,738	8,659	325	949	—	12	—	631	82	24,728
1913	5,543	11697	7,760	270	848	—	10	—	196	14	25,783

Price of Salmon.

From other figures supplied by the Fishmongers Company, it appears that while the average price of salmon from all sources sold at Billingsgate during 1913 was 1*s.* 8*d.* per lb., English salmon averaged 1*s.* 5¾*d.*, Scotch 1*s.* 6½*d.*, and Irish 1*s.* 6*d.* per lb. The average monthly price for English salmon did not exceed 1*s.* 11*d.* per lb., which was reached in February. The next highest average monthly prices for English fish were 1*s.* 10½*d.* (in September) and

1*s.* 9*d.* (in March). The highest average monthly price for Irish fish was 4*s.* 8*d.* (in January) and for Scotch 2*s.* (in February). Prices in general were slightly lower than in 1912, the highest being the 4*s.* 8*d.* mentioned above for Irish salmon in January. The Siberian salmon realised 8*d.* to 9*d.*, and the Canadian generally 1*s.* per lb.

"Sealing" of Salmon for Sale during Close Season.

The number of fish sealed by the Fishmongers Company for sale during the close season has increased from 11,158 in 1912–13 to 29,935 in 1913–14, owing to the large number of Canadian salmon imported. 1,888 cases of Siberian, 108 cases of Canadian, and 5 cases of British Columbian salmon were sealed for exportation to the Continent in 1913–14.

The following table shows the number of fish sealed at various places in Great Britain and the country of origin in each case :—

Place.	Country of Origin.	Number Sealed.	Total.
Aberdeen	Scotland	614	614
Birmingham	Canada	241	241
Blackpool	Do.	49	49
Brighton	Scotland	15	15
Cheltenham	England	19	19
Dundee	Scotland	12	12
Edinburgh	Do.	43	43
Glasgow	Do.	130	418
	Canada	187	
	Siberia	73	
	Newfoundland	28	
Grimsby	British Columbia	697	697
Hull	Do.	594	609
	Denmark	10	
	Scotland	5	
Leeds	Siberia	23	85
	Canada	62	
Leicester	Do.	249	249
Liverpool	Do.	9,695	11,087
	British Columbia	1,210	
	Siberia	163	
	Scotland	19	
London	Canada	7,164	14,572
	Siberia	5,567	
	British Columbia	1,338	
	Scotland	263	
	Ireland	239	
	Holland	1	
Manchester	Norway	333	538
	Siberia	173	
	Canada	32	
Nottingham	Do.	23	31
	Scotland	8	
Portsmouth	Canada	41	58
	Scotland	17	
Southampton	Do.	446	596
	Ireland	147	
	Canada	5	
		Total ...	29,935

In the following table a summary is given of the foregoing returns according to country of origin :—

Country of Origin.	Number Sealed.	Country of Origin.	Number Sealed.
Canada	17,748	Norway...	333
Siberia	5,999	Newfoundland... ...	28
British Columbia ...	3,839	England	19
Scotland...	1,572	Denmark	10
Ireland	386	Holland...	1

Traffic in Fish in Close Season.

The Fishmongers Company have again been good enough to furnish the Board with a return of the cases of alleged breach of those provisions of the Acts which relate more particularly to the traffic in the young of salmon and in unclean and unseasonable fish, and to the possession of illegal instruments, in which they took proceedings.

These cases were numerous, but they do not appear to be of sufficient general interest to warrant their being given in detail.

OTHER INLAND FISHERIES.

Freshwater Fisheries.

Recent Provisional Orders, enacted or contemplated, have brought into some prominence the question of freshwater fish generally.

Following upon the interpretation of the term in the Freshwater Fisheries Act, 1884, "freshwater fish" in the majority of Provisional Orders are defined as "fish of any kind (exclusive of all migratory fish of the genus Salmon) which live permanently or periodically in fresh water." That is to say, all fish inhabiting or occurring in the waters included within the areas of the respective Provisional Orders, except salmon and sea trout, are for purposes of the Orders freshwater fish.

A differentiation between the various classes of fish included in the term freshwater fish is, however, not only convenient and natural, but necessary in considering the question of the relative influence of such fish upon salmon fisheries and of the less important kinds of freshwater fish upon certain co-existing and perhaps more valuable freshwater fish.

Trout.

Speaking quite broadly, it would be desirable to exclude from rivers well adapted to produce and maintain a plentiful supply of salmon all other species of fish. This is, however, obviously impracticable, and it will be admitted generally that trout, at all events, may exist in salmon rivers without any serious detriment to the welfare of the more valuable fish. It is largely a question of food supply. Where this exists in reasonable quantity the young salmon are probably quite able to compete successfully with the trout. The suggestion has been made, however, that the conditions of food supply under which salmon spend their fluviatile existence may exert an influence of some importance on their subsequent growth and development in the sea. This points to the possibility that parr bred in rivers where there is a plentiful supply of food develop more quickly and into finer fish than parr whose food supply from some cause or other has to a certain extent been curtailed. It is possible that the presence in large numbers of trout in rivers where food is not plentiful may have the effect of retarding the growth, and perhaps adversely influencing the subsequent development of young salmon. But on this point practically no evidence exists.

Further, in rivers containing numbers of large-sized trout there is every reason to suppose that considerable quantities of salmon fry fall victims to their predatory habits. But it is reasonable to assume, on the other hand, that by consuming an approximately equal proportion of the young of their own species, they redress the balance in favour of the surviving salmon fry in the competition for food. Moreover it must be remembered that the presence of trout in salmon rivers may be a source of revenue not only to owners of fisheries, but also to Boards of Conservators, and it would be inexpedient not to recognise the importance of trout fisheries even when their existence may appear to be contrary to the best interests of the salmon fisheries of the same river.

This is one aspect of the conflict of views which is found among those interested in the fisheries of some of our rivers. There is another, and contrary aspect of the same conflict: some owners of trout fisheries view with disfavour the presence of salmon and salmon fry in their waters, on the ground that the trout spawning beds are disturbed and the food supply of the trout reduced without any concomitant advantages to themselves.

It is, of course, in the upper reaches of rivers, and in their smaller tributaries that the interests of trout and salmon are most liable to clash. Many owners of valuable trout fisheries frequented only by gravid autumn salmon, useless alike for the table and for sport, can hardly be blamed for regarding the presence of salmon in their waters with displeasure. The attempt has been made in some instances to meet this objection by measures undertaken to give salmon access to the upper waters earlier in the season (when they have a sporting value) and in greater numbers as, for instance, by the removal of obstructions and the restriction of netting in narrow waters. Generally speaking, it should as a rule be found possible to arrange matters in such a way that no cause for grievance need arise, and to establish a harmonious working relationship between the trout fishing interests on the one hand, and the salmon fishing interests on the other.

Grayling.

The grayling again has been the topic of more or less heated controversy. Grayling are not devoid of a certain value from an edible point of view, and claim, with some justification, the regard of rod and line fishermen; but it is held in many quarters that experience has abundantly demonstrated the unwisdom of introducing them into valuable trout fisheries or encouraging them in such waters where they have already been established. A marked reversal of opinion appears to have taken place within recent years on this subject. The idea at one time prevailed that grayling were delicate fish, and the fact that the rivers in which they occurred were limited in number was considered as an indication that certain special but incompletely understood qualities, either in the character of the water, or in the nature of the river bed, or both, were essential to the species. Their non-predatory habits and the facts that they spawned in the spring and were in their best condition at a time when trout and salmon were spawning and in their worst condition, were points which were deemed to be in their favour, and induced many people in various parts of the country to preserve them carefully where they already existed, and even to introduce them where they did not previously exist.

These ideas, however, have now undergone a radical alteration. It has been found that grayling are no more delicate or fastidious in their choice of water than trout. On the contrary, they have shown a degree of fertility and vigour with which the trout in the same waters seem to have been quite unable to compete, a fact which many observers held responsible for the conversion of good trout fisheries into indifferent or poor ones. The governing factor is probably the food supply, though even in streams where food is plentiful (*e.g.*, the South Country chalk streams) the presence of grayling in numbers is held to have had a similar adverse effect upon the quantity and quality of the trout. Even the predatory habits of trout, which might have been supposed to act eventually as a balancing factor, do not appear to make any appreciable difference, though it can hardly be doubted that grayling fry must form a not inconsiderable proportion of the food of the larger trout.

Whatever may be the reason, there appears to be some evidence to support the view that where grayling increase trout decrease, and many owners of trout fisheries are now endeavouring to get rid of grayling, a task which has invariably been found to be more difficult than their introduction.

Coarse fish.

In considering the question of "coarse fish" in salmon or trout fisheries it is only necessary to refer to those species which are commonly found in salmon or trout rivers, and from them to differentiate the species which are, or are likely to be actively harmful from those in which the possibilities for harm are too remote for serious consideration.

On general grounds, it is not wise to encourage any except the smaller kinds of "coarse fish" in waters in which either salmon or trout are of prime importance. The actual suppression of "coarse fish," however, is not always expedient, even in salmon rivers, or practicable.

For instance, in a river in which there are public and private salmon fisheries of considerable value, there may be certain reaches which are valueless either as salmon or as trout fisheries, but in which "coarse fish" occur and are to be caught by rod and line in such numbers as to attach some value, albeit a minor one, to the water. The existence of such a stretch of water would by many be regarded as an attraction to the neighbourhood, and may be the means of providing the Board of Conservators with an important source of revenue from the sale of rod licences for fishing for freshwater fish. The vigorous enforcement of measures calculated to suppress "coarse fish" in such a case as this, in addition to being unpopular, would scarcely be just, in the circumstances. The principle, however, of imposing a licence duty for freshwater fish angling in salmon rivers, though it may add appreciably to the funds of the Conservators, is one requiring very careful consideration. In the majority of existing Provisional Orders the power to levy a licence duty for freshwater fish angling carries with it the right to representation on the Board of Conservators of the freshwater fish licensees who contend, and quite reasonably, that the revenue derived from the sale of freshwater fish licences should be applied to the development of the freshwater fish fisheries. In such circumstances the question how far these fisheries can be developed without seriously affecting the more valuable salmon fisheries, which, being of commercial and public importance should of course invariably take precedence, is one not easy to decide.

Apart from these general considerations, however, particular reference may be made to five species of freshwater fish which, under certain circumstances do undoubtedly, in varying degree, affect salmon and trout fisheries. These are dace and chub, pike, perch, and eels.

Dace and Chub.

The objection to the presence of dace and chub in salmon and trout waters is based principally on the question of food supply. These fish frequent the same class of water as trout and the young of salmon and feed actively on the same kind of food. In addition, chub, being by habit omnivorous, are responsible for the destruction of a great number of small fish, among which are to be included the fry of both salmon and trout in greater proportion, perhaps, than those of any other species, because they are to be found in their greatest quantity and in their most helpless stage at a time of year when fry of other fish are not easily to be found, and when food of any kind is comparatively scarce. Both dace and chub, especially chub, are exceedingly prolific and hardy, and unless checked will spread themselves over extensive stretches of valuable trout waters and salmon spawning grounds, which they will eventually monopolise.

Pike.

Pike are almost universally regarded as vermin in trout and salmon fisheries. Being by nature entirely predatory, they must undoubtedly destroy a great number of smaller fish. But where other undesirable species co-exist, such as chub and dace, it is by no means unlikely that pike may indirectly effect some measure of good by keeping down the numbers of these coarse fish. Large pike, in waters frequented by other "coarse fish" as well as by salmon and trout, are probably less harmful than those of smaller size. Being less active and frequenting the deeper and more sluggish parts of rivers, they must feed in the main on fish other than trout and the young of salmon, though they are no doubt responsible for the destruction of many smolts at the time of the annual seaward migration. Moreover, unlike chub and dace and most other "coarse fish," pike of a certain size when taken from unpolluted streams are not entirely valueless as food. In fact, past records seem to indicate that pike were at one time held in higher esteem even than salmon, and it is rather remarkable that they are not now more regularly marketed with other familiar food fishes, many of which are inferior to pike in quality. The possibility of utilizing pike in this way, whilst it does not render the presence of pike in salmon and trout fisheries any more to be desired, and perhaps cannot even be regarded as an extenuating circumstance, should at all events not be disregarded entirely.

In large lakes frequented by trout, the presence of pike may not only be free from serious objection, but may as a matter of fact exercise a beneficial effect by acting as a check upon the numbers of the trout and so producing fish of better quality. The extreme policy of attempting to eradicate pike from waters of this class is probably in most cases not the most advisable, and in any case should not be put in action without very careful consideration of its possible effects.

Perch.

Perch, though predatory by nature, have such a comparatively restricted distribution and occur so rarely in very large numbers in waters suitable to salmon and trout, that the harm they do can scarcely be a matter of very great importance. Stagnant rather than swiftly running waters may be said to be the natural habitat of perch, and, unlike pike, chub and dace, they do not as a rule seem to be able to adapt themselves very readily to rivers which in character can properly be called salmon rivers. Large quantities of perch in lakes holding trout no doubt affect the available amount of food, but on the other hand the fry of perch themselves are a by no means unimportant item in the food supply of the larger trout. The further point must not be forgotten that perch of reasonable size, obtained from pure waters containing abundance of food, are vastly superior as food fish to the majority of freshwater fish and to many sea fish which obtain a ready sale.

EEL FISHERIES.

Eels, though technically speaking freshwater fish and very often included under "coarse fish," fall to be considered in a different light to other freshwater fish generally. Together with pollan, trout and char, they were expressly excluded from the definition of freshwater fish in Section 11 (1) of the Freshwater Fisheries Act of 1878 (as amended by the Freshwater Fisheries Act of 1886), and, like pollan, have no close season, though this would not seem to apply as regards fishing for eels with rod and line during the statutory close season for freshwater fish, viz., from March 15th to June 15th.

In the interests of salmon fisheries alone, the presence of eels in salmon rivers is undesirable. Evidence points very strongly to the probability that they destroy large quantities of ova and fry both of salmon and of trout, and from the fact that they are chiefly nocturnal in their habits and not readily observed, the mischief for which they are responsible is no doubt much more serious than is always apparent.

In some salmon fishery districts the necessity for keeping the number of eels within reasonable limits is recognised by the legalization of night lines (which by virtue of legal decisions are in certain cases otherwise illegal). In certain rivers, however, the capture of eels assumes the dimensions of a local fishing industry of some importance. In parts of Ireland, indeed, a value is attached to the eel fisheries only slightly less than that of the salmon fisheries. By comparison with these the eel fisheries of this country are insignificant, but there is no reason why, where the conditions are favourable, they should not be developed and made to contribute more largely to the national fish supply. As a food fish the freshwater eel is valuable. On the Continent this fact is appreciated to the extent that eel-culture, the object of which is to provide a regular and plentiful supply of the ripe and fattened fish for the market, is conducted on a considerable scale, and in some cases is aided by Government grants. Indeed in successive years during the elver season the Severn has been visited by agents from various parts of Germany, who have purchased eel fry in very large numbers for transportation to German waters.

The abundant supply of fresh sea fish available in this country and the established preference of the nation for sea fish rather than freshwater fish as an article of food, make it improbable that the freshwater fisheries will be developed commercially on a scale comparable with that obtaining on the continent, and perhaps most especially in Germany. There is still a market for freshwater fish in England—notably among the Jewish community in the east end of London, and it is understood, though reliable statistics are not available, that the value of the year's imports probably exceeded some £10,000, of which the imports from Holland alone represented something over £5,000.

Whether or not it is thought worth while for British enterprise to endeavour to cater for this market, there can be little doubt that the possibility of establishing valuable local eel fisheries is worthy of consideration. There is already a regular demand for eels in British markets, which is largely supplied at present by importation from Holland. There is a much greater demand in continental markets and there is no obvious reason why this country should not both supply its own markets and contribute to those of its neighbours. In Denmark, Holland and Germany, the eel is a fish of considerable economic importance. In Denmark alone the value of a year's landings of eels exceeds £200,000. The eels are returned under two heads, as silver eels (*i.e.* ripe eels, migrating to the sea or fit for migration) and yellow eels which are not yet mature. The landings in 1913 amounted to 2,027,385 kilogrammes of silver eels and 2,693,628 kilogrammes of yellow eels, valued at 2,185,237 Kr. (£102,835) and 2,481,011 Kr. (£116,753) respectively.

The great majority of the silver eels are caught in the sea during their oceanward migration from the inland waters. But a new and most ingenious method of eel culture which has been practised of recent years by a Dane named Nielsen is deserving of notice. He is the proprietor of a piece of low-lying land on the Ise Fjord in the island of Zeeland, so banked in as to form a pond of about 432 acres which is on an average about two feet deep. The water in the pond is somewhat brackish, and this is held to be an advantage, because it permits of the development of abundant quantities of Mysidæ and upon these the eels feed and thrive. The proprietor has contrived, however, that either salt water from the Fjord or fresh water from the adjacent canal can be pumped into the lake as desired. The power for the pump is economically afforded by two wind-mills.

Mr. Nielsen's method of eel culture is an ingenious application of the discoveries of science to a practical economic end. The eel spends the greater part of its life in fresh water, but, on attaining sexual maturity, it instinctively seeks the sea where it spawns (this statement appears to apply to all the eels of western Europe) far out in the Atlantic in the neighbourhood of the Sargasso Sea. This marvel of nature was established beyond doubt by Dr. Johan Schmidt of the Carlsberg Laboratorium of Copenhagen working under the auspices of the International Council for the Exploration of the Sea. The young eels in their helpless larval stage drift with the ocean currents until they become elvers when they make their way into the fresh waters where they remain till they have reached the stage of maturity at which nature urges them to return to the sea which gave them birth. The fact of the annual migration of elvers to fresh water has long been known and for some years past large quantities of them have been taken, notably from the Severn, for export alive to Germany and other continental countries, there to be added to the stock in eel ponds and other fresh water fisheries.

Nielsen observed that the elvers annually appeared in the Ise Fjord alongside his lagoon in the early spring months and he conceived the ingenious idea of attracting them into a trap by means of a supply of fresh water which is allowed to run through a sluice constructed in the bank of the lagoon and thence down a sloping platform into the Fjord. He found that when he wished to discharge a volume of water through the sluice sufficient to have such an effect upon the surrounding salt water as to attract the elvers to its neighbourhood, the flow was too strong to allow the elvers to ascend the slope without assistance. He therefore constructed bands of twisted straw which are attached to the sloping platform and allowed to drift out into the Fjord. The elvers are able to wriggle along these bands, and by means of them to make their way up the slope into a specially constructed trap from which they are easily taken and, being counted, are transferred to the lagoon in such quantities as the proprietor thinks desirable. The method of counting is to count one kilogramme and then use the number contained in the kilogramme as the unit for further calculation. By means of the trap some 50,000 elvers were introduced in 1905 and in subsequent years the number has varied from about 60,000 in 1906 to about 300,000 in 1913.

When, on the other hand, Nielsen requires ripe, fully grown eels for the market he again takes advantage of the natural instinct of the mature eel to migrate toward salt water. Salt water from the Fjord is pumped over the dam into the pond through boxes specially constructed for catching the eels which, being attracted by the salt water, enter the boxes and are there trapped. By this means as many as 300 lbs. of eels have been caught in a single night, and the method has the advantage that the proprietor can take eels when he pleases and can therefore place them on the market when the prices are such that he will secure the greatest advantage from them. The stock of eels in the lagoon was estimated in 1912 to be between 700,000 and 800,000 and the average annual catch was then estimated at about 10,000 lbs. In the year 1913 it was estimated that the weight of eels taken was about 13,000 lbs.

It has already been mentioned that there is a considerable natural supply of food for the eels in the lake. Mr. Nielsen is, however, experimenting with artificial feeding with a view first to discovering whether artificial feeding appears to promote the more rapid development of the eels and secondly to provide a substitute for the natural food if, though this seems improbable, the natural supply should for any reason fail. His method of feeding is to purchase small unmarketable fish from local fishermen and to chop these fish into small pieces by means of a grinding machine which is also worked by one of his two wind-mills.

It has been thought worth while to mention the successful enterprise of Mr. Nielsen because it appears probable that there are in the neighbourhood of the coasts of England and Wales enclosed fresh or brackish waters in which the same system of cultivation could successfully be applied. Mr. Nielsen's method would no doubt need to be adapted to local conditions. His fishery is most favourably situated and he himself states that the running expenses are practically nothing. The initial cost of the wind-mills was inconsiderable and the only labour employed in the fishery is that of Mr. Nielsen himself and one man. Whether there are situations in England in which the same method could be adopted at as little expense, only investigation and experiment can show, but the abundance of the supply of elvers coming into British waters and the fact that certain continental countries have found it worth while to import these elvers to their own waters suggests that there may be here an opportunity for the development of a profitable British industry.

The German system of eel culture has already been the subject of a memorandum published by the Board in 1912. In that country elvers (obtained almost entirely from England) are distributed on a large scale and cheaply to various inland waters through the agency of the German Sea Fisheries Society (Deutscher Seefischerei Verein) and the full grown eel has a high market value in the country. Elvers are also exported from England at the present time to other countries on the continent, including Denmark. Their supply comes chiefly from the Severn and the number imported into Denmark in 1913 amounted to about 500,000. It has been estimated by a competent authority in Denmark that in the present year some two million of elvers will be imported, but, on the other hand, from the statement of the same authority, it would appear that the Danes are likely in future years in the light of recent experience to seek their supply of elvers on their own coasts.

It will be observed that should any endeavour be made in this country to develop a commercial eel fishery along the lines of Nielsen's experiment, the fact that the experiment could only be made in closed waters would preclude the possibility of conflict with salmon interests.

APPENDIX I.

RETURNS MADE BY BOARDS OF CONSERVATORS IN COMPLIANCE WITH THE FOLLOWING REQUISITION :—

1.—Was the take of salmon and migratory trout in 1913 above, about, or below the average : (*a.*) In tidal waters? (*b.*) In fresh waters? (*c.*) Generally?

2.—Can you give an estimate of the number and gross weight of salmon and migratory trout caught in 1913 : (*a.*) With net? (*b.*) With rod?

3.—What is your report for the year 1913 on the fisheries (if any) for—(*a.*) trout ; (*b.*) char ; (*c.*) grayling ; (*d.*) eels ; (*e.*) other freshwater fish?

4.—Did "salmon disease" appear in 1913? If so, state full particulars.

5.—State the number of water bailiffs employed in your District in 1913 : (*a.*) paid out of the funds of your Board ; (*b.*) not so paid.

6.—Give particulars of any dams destroyed (wholly or in part) or abandoned in 1913 ; and of any new dams built, or old dams rebuilt after having been destroyed or taken down to the extent of half their length ; and of any dams altered. What steps have been taken to secure the construction of fish-passes in any of the above-mentioned cases?

7.—Were any other fish-passes built or altered in 1913? If so, give full particulars.

8.—Are the approved fish-passes in good condition? Give particulars with respect to any requiring repairs.

9.—What action, if any, has been taken, either by new fisheries being started, old fisheries not being used, or otherwise, whereby the ascent of fish has been influenced?

10.—Were any channels for the supply of waterworks or canals opened in 1913? If so, have gratings been attached thereto?

11.—Were any other gratings or similar devices erected in 1913? If so, give particulars.

12.—Were any new mines or factories discharging, or likely to discharge substances deleterious to fish, opened in 1913 ; or was there otherwise any additional discharge of poisonous or deleterious matter into your rivers?

13.—What steps were taken in 1913 to prevent pollution from mines and factories, or sewage from towns from entering your rivers? Have such steps proved successful?

14.—Make a return of all licences issued in 1913.*

15.—Have the private fisheries in your District been assessed for contributions by virtue of a Provisional Order under the Salmon and Freshwater Fisheries Act, 1907? If so, state at what rate, and the amount realised in the year 1913.

16.—Make a return of all prosecutions instituted by your Board under the Salmon and Freshwater Fisheries Acts in 1913.

17.—Is there any other point to which you wish to draw attention?

18.—What dates and places are fixed for meetings of the Board of Conservators in the ensuing year?

19.—What are the names and addresses of the chairman and clerk of your Fishery Board?

N.B.—*In the arrangement of the Returns the Districts are taken in their order on the line of coast, beginning at the north-west.*

Answers consisting of a simple negative are omitted.

A Summary only of the answers to question 16 *is included.*

The answers to question 19 *are tabulated in Appendix IV.*

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* The "Licences other than for Salmon" shown in the Returns were in every case for "Trout and Char," except in the cases of the Lune, Wye, Severn, Derwent and Norfolk Districts, where licences are issued for fishing for Freshwater fish.

EDEN DISTRICT.

1.—(*a.*) Below the average.

2.—(*b.*) 700 salmon, weighing 11,200 lbs.

3.—(*a.*) Very poor season, owing to the long drought.

4.—There was a little among the kelts in the early spring Spring fish not much affected.

5.—(*a.*) 7 permanent, 1 temporary. Total, 8.

7.—The fish-pass at Lyvennet Mill was completed in June and appears to be quite satisfactory.

13.—New sewage works were recently put into operation at Kirkby Stephen and appear to be satisfactory, the effluent being quite clear.

14:—

FOR SALMON.

			£	s.	d.		£	s.	d.
Coops (at Corby) (Private Waters)	3	at	6	0	0	=	18	0	0
Coracle net (Private Waters)	1	,,	2	5	0	=	2	5	0
Haaf, heave, or lave net (Public Waters) ...	52	,,	1	10	0	=	78	0	0
Hang or drift net (Private Waters)	2	,,	5	0	0	=	10	0	0
,, ,, (Public Waters)	12	,,	5	0	0	=	60	0	0
Draft or seine net (Private Waters)... ...	5	,,	5	0	0	=	25	0	0
Rod : for the season (Waver, Wampool, and Irthing)	28	,,	0	7	6	=	10	10	0
,, ,, (single handed) ...	10	,,	0	7	6	=	3	15	0
,, ,, (whole district)... ...	81	,,	1	10	0	=	121	10	0
,, ,, (below Botcherby Lane)	62	,,	1	1	0	=	65	2	0
,, ,, (above Armathwaite) ...	17	,,	1	1	0	=	17	17	0
,, for a week	89	,,	0	5	0	=	22	5	0
,, for a day	59	,,	0	2	6	=	7	7	6
General Licences	1	,,	32	0	0	=	32	0	0
,, ,, ...	1	,,	4	0	0	=	4	0	0
Total							477	11	6

OTHER THAN FOR SALMON.

			£	s.	d.		£	s.	d.
Shoulder nets	1	at	1	10	0	=	1	10	0
Rod : for the season	766	,,	0	4	0	=	153	4	0
,, for a week	503	,,	0	1	6	=	37	14	6
Total							192	8	6

16:—

FIRST OFFENCE.

Convictions.—Using gaff, 3; using draft net without licence, 4; using snatch for salmon, 2; disturbing spawning salmon, 1; possession of unclean salmon, 1; taking young of salmon, 2; obstructing bailiff, 3; using salmon roe as bait, 2; grappling trout, 1; taking trout by night lines, 1; possession of snare, 1; taking trout with spear, 1; mill-take open on Sunday, 1; fishing (hang net) without licence, 1; assault on bailiff, 1.

Acquittals.—Use of hang net in close time, 1; use of more nets than licensed, 1; spearing trout, 1.

Withdrawn.—Using draft net without a licence, 4; using snatch for trout, 1; grappling trout, 1; using more net than licensed, 1.

SECOND OFFENCE.

Convictions.—Using gaff for taking salmon, 2; illegal possession of salmon, 3.

Withdrawn.—Use of gaff, 1.

THIRD OR SUBSEQUENT OFFENCE.

Convictions.—Using gaff to take salmon, 14; gaff in possession, 2; using shackle net, 2; obstructing bailiff, 3; using snatch, 1; illegal possession of salmon, 2; disturbing spawning salmon, 1.

Acquittals.—Taking young of salmon in sparling net, 1; obstructing bailiff, 1.

17.—The great scarcity of sea-trout is causing the Board much anxiety, and they hope that an enquiry will be held without further delay. Sea-trout have been declining in number for several years and the result has been a heavy loss to the Board in Licence Duties. The Solway haaf-netters take out licences more for sea-trout than for salmon, and in the year 1913 the number dwindled down to 52, less than for many years.

18.—The third Saturday in the months of January, April, July and October, at the Courts, Carlisle.

DERWENT DISTRICT.

1.—(*b.*) and (*c.*) Much below average.

3.—(*a.*) and (*e.*) Poor.

4.—Very little disease seen up to date.

5.—(*a.*) 4 permanent. (*b.*) 1 permanent (paid by Salmon Hall Fishery). Total, 5.

7.—Fish-pass and weir repaired and an auxiliary pass constructed at Fitz Mill End, Cockermouth. A new fish-pass erected on Castle Side of Messrs. Harris's weir on River Derwent, above Cockermouth.

8.—Seemingly in good repair.

12.—Old sources of pollution from lead and coal mines still prevalent. Iron mines on River Marron have been opened and are polluting this stream.

13.—Matter of prevention of serious pollution by lead and coal and iron mines, sewage from townships and general pollution referred to which is still being considered by Cumberland County Council. Allerdale Coal Co. at Clifton, near Workington, propose constructing Catch Pits to treat their effluent.

14:—

FOR SALMON.

		£	s.	d.		£	s.	d.
Coops at Salmon Hall, Salmon Hall Fishery Lessees (Private Waters)	1 at	12	0	0	=	12	0	0
Rod: for the season	71 „	1	10	0	=	106	10	0
„ before 15th September	30 „	0	15	0	=	22	10	0
„ for a month	14 „	0	10	0	=	7	0	0
„ in any part of District above Bassenthwaite Lake before 14th September	24 „	0	7	6	=	9	0	0
General Licences	1 „	15	0	0	=	15	0	0
Total						172	0	0

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Nets	3 at	1	10	0	=	4	10	0
Rod: for the season	267 „	0	5	0	=	66	15	0
„ for a week	165 „	0	2	6	=	20	12	6
„ for a day	95 „	0	1	0	=	4	15	0
Total						96	12	6

15.—Gross assessment of private fisheries is £778, which at 11*s.* in the £ = £427 18*s.*; arrears owing 31st December, 1912, £42 1*s.* 6*d.* Total, £469 19*s.* 6*d.* Arrears owing 31st December, 1913, £48 19*s.*; amount realised 1913, £421 0*s.* 6*d.*

16:—

FIRST OFFENCE.

Conviction.—Possession of a click hook and disturbing salmon, 1.

Acquittal.—Possession of a click hook and disturbing salmon, 1.

17.—The desirability of taking urgent steps to reduce the number of sea gulls which are greatly on the increase, and to prevent pollution.

18.—Second Mondays in January, April, July and October, 1914, at Cockermouth.

WEST CUMBERLAND DISTRICT.

1.—(*a.*), (*b.*) and (*c.*) Below the average.
3.—(*a.*) Very fair.
5.—(*a.*) 2 permanent. A number of sea fisheries officials and gamekeepers also act as honorary bailiffs.
8.—Yes.
14 :—

FOR SALMON.

			£	s.	d.		£	s.	d.
Box, crib, cruive, &c. (Private Waters) ...	3	at	5	0	0	=	15	0	0
Hang or drift net (Private Waters) ...	1	„	5	0	0	=	5	0	0
Rod : for the season	117	„	0	10	6	=	61	8	6
„ for a week	15	„	0	5	0	=	3	15	0
„ for a day	11	„	0	2	0	=	1	2	0
Total							86	5	6

OTHER THAN FOR SALMON.

			£	s.	d.		£	s.	d.
Rod : for the season	244	at	0	2	6	=	30	10	0
„ for a week	82	„	0	1	0	=	4	2	0
Total							34	12	0

17.—None, except that a wholesale and unprecedented destruction of salmon and other fish was occasioned in the month of October, 1913, by pollution from the Walk Mill Pit of Moresby Coal Company, Ltd., in respect of which the Company has paid to the Board of Conservators the sum of £50 as compensation.

18.—Quarterly on or about the last Thursday in the months of February, May, August and November in the Union Hall, Whitehaven.

KENT DISTRICT.

1.—(*a.*) and (*b.*) Below the average.
3.—(*a.*) Fair. (*b.*) About the average. (*d.*) Fair. (*e.*) Bad.
4.—Very little, but a good many fish died, evidently from the effects of spawning.
5.—(*a.*) 4 permanent; 1 temporary. Total, 5.
7.—A pass at Sedgwick Weir on the Kent was completed in accordance with the requirements of the Board of Agriculture and Fisheries.
8.—Yes. A good many salmon have been seen this year above Cowan Head on the Kent.
12.—A company has been formed to treat the waste heaps of the Cometon Copper Mines and has started work. A careful supervision is being kept on same.
14 :—

FOR SALMON.

			£	s.	d.		£	s.	d.
Draft or seine net (Public Waters)	5	at	5	0	0	=	25	0	0
Rod : for the season	160	„	0	10	0	=	80	0	0
„ for a week	3	„	0	5	0	=	0	15	0
Total							105	15	0

OTHER THAN FOR SALMON.

			£	s.	d.		£	s.	d.
Draft net	1	at	1	13	4	=	1	13	4
Plumb line for char	69	„	0	7	6	=	25	17	6
Rod. for the season (Windermere and all district)	324	„	0	5	0	=	81	0	0
„ „ „ (all district except Windermere) ...	1,265	„	0	2	6	=	158	2	6
, for week-ends (Windermere)	8	„	0	2	6	=	1	0	0
Total							267	13	4

15.—The assessment is being made but no rate has been levied as yet.

16 :—

FIRST OFFENCE.

Convictions.—Shooting trout, 1; fishing without a licence, 1.

18.—March 5th, Ulverston; June 3rd, Bowness on Windermere; October 7th, Bowness on Windermere; January 7th, 1915, Ulverston.

LUNE DISTRICT.

1.—(*a.*), (*b.*) and (*c.*) Below the average.

2.—(*a.*) 1,009 salmon, weighing 11,333 lbs.; 57 migratory trout, weighing 165 lbs.; (*b.*) 38 salmon, weighing 454 lbs. Total fish, 1,104, weighing 11,952 lbs.

3.—(*a.*) Trout fishing generally was poor owing to the dry season.

5.—(*a.*) 8 permanent. (*b.*) 2 permanent. Total, 10.

7.—The fish-pass at Halton has been repaired at a cost of £118 6*s.* 4*d.*, but some slight improvements to it are still necessary before it is quite efficient.

8.—Yes, so far as the Board are aware.

14 :—

FOR SALMON

		£	*s.*	*d.*		£	*s.*	*d.*
Box, crib, cruive, &c. (Private Waters) ...	1 at	10	0	0	=	10	0	0
Haaf, heave, or lave net (Public Waters) ...	15 ,,	3	0	0	=	45	0	0
Ditto ditto ...	3 ,,	1	10	0	=	4	10	0
Hang or drift net (Public Waters)	2 ,,	10	0	0	=	20	0	0
Ditto ditto	6 ,,	8	0	0	=	48	0	0
Ditto ditto	1 ,,	6	0	0	=	6	0	0
Draft or seine net (Public Waters)	3 ,,	5	0	0	=	15	0	0
Rod : for the season	65 ,,	1	0	0	=	65	0	0
,, ,, (above Kirkby Lonsdale Bridge) ...	65 ,,	0	10	0	=	32	10	0
,, ,, (Wyre)...	158 ,,	0	5	0	=	39	10	0
,, ,, (Keer)	70 ,,	0	5	0	=	17	10	0
General Licences	16	...		...		31	14	0
Total						334	14	0

OTHER THAN FOR SALMON.

		£	*s.*	*d.*		£	*s.*	*d.*
Rod : for the season	1,174 at	0	2	6	=	146	15	0
,, for a month	873 ,,	0	1	0	=	43	13	0
Total						190	8	0

15.—Yes, at 2*s.* in the £, realising £105 3*s.*

FIRST OFFENCE.

16 :—

Convictions :—Taking unseasonable salmon, 2; taking unclean salmon, 1; taking two smolts, 1; possession of a snatch, 1.

Acquittal.—Possession of snatch, 1.

THIRD OR SUBSEQUENT OFFENCE.

Conviction.—Attempting to take salmon.

17.—The Board have, in spite of the weather being unfavourable, marked 700 smolts. The Board again express the wish that the Development Commissioners will make a substantial grant towards the cost of erection and alteration of fish-passes upon which the Board have spent during the last few years a very considerable sum of money.

18.—Saturday, 7th March, 1914, at Lancaster; Thursday, 2nd July, 1914, at Kirkby Lonsdale; Saturday, 7th November, 1914, at Lancaster; Saturday, 9th January, 1915, at Lancaster.

RIBBLE DISTRICT.

1.—(*a.*) and (*b.*) Below the average. (*c.*) Salmon were unable to run between the middle of June and the first week in November. The fish on the spawning beds are not as numerous as last season. Migratory trout were exceedingly scarce.

2.—(*a.*) About 430 salmon, weighing about 5,200 lbs.

3.—(*a.*) Good up to the end of May, but poor afterwards owing to want of water. (*c.*) Numerous in the Ribble above Clitheroe. (*e.*) There are a good many chub in the river.

4.—Owing to the low water a few of the fish lying in the pools became affected with fungus. Some also died owing to pollution.

5.—(*a.*) 5 permanent. Several gamekeepers hold appointments as water-bailiffs.

7.—Slight repairs were done to the fish-pass at Low Moor weir (sometimes called Waddow weir).

8.—The fish-pass at Low Moor weir still requires improving.

9.—The Board has paid acknowledgments to three owners of fisheries in the narrow tidal waters not to net such waters.

12.—It is impossible for the Board to ascertain what is done up the valley of the Calder, the pollution from which river is very bad.

13.—The Ribble Joint Committee deals with matters of pollution. The Fishery Board has not sufficient power.

14 :—

FOR SALMON.

			£	s.	d.		£	s.	d.
Hang or drift net (Public Waters)	17	at	5	0	0	=	85	0	0
Rod : for the season	115	„	1	0	0	=	115	0	0
„ for a month	8	„	0	10	0	=	4	0	0
General Licences	7		...		...		22	10	0
Total	...		...		...		226	10	0

OTHER THAN FOR SALMON.

			£	s.	d.		£	s.	d.
Rod : for the season	481	at	0	5	0	=	120	5	0
„ for a week	41	„	0	2	6	=	5	2	6
„ for a day	160	„	0	1	0	=	8	0	0
Total	...		...		...		133	7	6

15 :—They have been assessed but no contributions have yet been levied.

16 :—

FIRST OFFENCE.

Withdrawn on payment of fine and costs.—For killing smolts, 1.

17.—The pollution from the Calder is very bad. There is also a pollution source on Barrow brook which caused on one occasion (during 1913) the death of several salmon and sea trout and a considerable number of brown trout. Observation is being kept upon the source from which it is thought this pollution arises.

18.—Four meetings are held annually : at each meeting the date of the next is fixed.

DEE DISTRICT

1.—(*a.*), (*c.*) About the average. (*b.*) Above the average.

4.—Fungoid disease appeared in the Alwyn and Corwen Districts—24 Salmon being found dead.

5.—(*a.*) 5 permanent ; 2 temporary. (*b.*) 3 permanent. Total, 10.

6.—Pentrefelyn Weir was partly washed down by a flood and is now repaired. A new Dam was erected on the Ceiriog at Chirk.

7.—A new Fish Pass has been constructed in Chester Weir and the head of the Fish Pass at Erbistock repaired.

8.—Yes. All the fish-passes are in good repair except Pentrefelyn which is partially washed down, but gives free ascent to fish.

13.—The question of pollution is very prominently before the Board and is receiving their active consideration.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Coracle net (Private Waters)	4 at	2	5	0	=	9	0	0
Draft net (Public Waters)	65 „	5	0	0	=	325	0	0
Trammel net (Public Waters)	9 „	15	0	0	=	135	0	0
Rod : for the season	117 „	1	0	0	=	117	0	0
„ for a week	14 „	0	10	0	=	7	0	0
„ for a day...	12 „	0	5	0	=	3	0	0
General Licences	2 „	3	0	0	=	6	0	0
Total						602	0	0

16 :—

FIRST OFFENCE.

Convictions.—Fishing with Salmon Roe, 3; Fishing Draft Net without License being endorsed, 1.

Acquittals.—Fishing Draft Net for Salmon with illegal mesh, 6; possession of Unseasonable Trout, 1.

18.—First Saturdays in February, April, July and October.

ELWY AND CLWYD DISTRICT.

1.—(*a.*) and (*b.*) Below the average. (*c.*) Worst on record.

2.—(*a.*) 75 salmon, weighing 400 lbs. (*b.*) 6 salmon, weighing 36 lbs.; 100 migratory trout, weighing 100 lbs. Total, 181 fish, weighing 536 lbs.

3.—(*a.*) Below the average.

5.—(*a.*) 3 permanent. (*b.*) 2 permanent. Total, 5.

6.—The weir below Llanfairtalhaiarn, belonging to Mr. Wynne of Garthewin, has been re-built. No fish pass has been provided. Matter reported to Board of Agriculture and Fisheries.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Draft or seine net (Public Waters)	7 at	3	10	0	=	24	10	0
Rod : for the season	78 „	1	0	0	=	78	0	0
Total						102	10	0

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	253 at	0	4	6	=	56	18	6
„ for a week	223 „	0	2	0	=	22	6	0
Total						79	4	6

16 :—

FIRST OFFENCE.

Conviction.—Unlawful possession of a gaff.

CONWAY DISTRICT.

1.—(*a.*), (*b.*), and (*c.*) Below the average.

2.—(*b.*) 59 salmon, weighing 634 lbs.; 49 migratory trout, weighing 46 lbs. Total, 108 fish, weighing 680 lbs.

3.—(*a.*) Fair.

4.—Very few this year.

5.—(*a.*) 2 permanent; 3 temporary. (*b.*) 3 temporary. Total, 8.

13.—The water bailiffs inspect the mines from time to time.

14 :—

FOR SALMON.

			£	s.	d.		£	s.	d.
Fishing-weir, Llandrillo yn Rhos (Private Waters) … … … … …	1	at	5	0	0	=	5	0	0
Do. Caerhun (Private Waters) …	1	,,	5	0	0	=	5	0	0
Basket or Cruive at Tanrallt, Bettws-y-coed (Private Waters) … … … …	1	,,	3	0	0	=	3	0	0
Draft or seine net (Private Waters) …	2	,,	5	0	0	=	10	0	0
,, ,, (Public Waters) … …	3	,,	5	0	0	=	15	0	0
Rod: for the season … … … …	30	,,	1	0	0	=	30	0	0
,, for a month … … … …	5	,,	0	10	0	=	2	10	0
,, for a week … … … …	38	,,	0	3	0	=	5	14	0
,, for a day … … … …	169	,,	0	1	0	=	8	9	0
Total … … … … … … …							84	13	0

OTHER THAN FOR SALMON.

			£	s.	d.		£	s.	d.
Rod: for the season … … … …	599	at	0	2	0	=	59	18	0
,, for a day … … … …	289	,,	0	0	6	=	7	4	6
Total … … … … … … …							67	2	6

17.—At present there is no obligation upon any one to make a return of fish caught, but it is hoped to get power to enforce this under a Provisional Order.

18.—6th April, Llandudno Junction; 6th July, Llanrwst; 5th October, Llandudno Junction; 4th January, 1915, Llanrwst.

SEIONT DISTRICT.

1.—(*a.*), (*b.*), and (*c.*), Below the average.
2.—(*a.*) Salmon, weighing 707 lbs.
3.—(*a.*) Very good. (*b.*) Unsatisfactory.
5.—(*a.*) 2 permanent; 1 temporary. Total, 3.
8.—There are no approved fish-passes on any dams in the district.
14 :—

FOR SALMON.

			£	s.	d.		£	s.	d.
Draft or seine net (Public Waters) … …	2	at	5	0	0	=	10	0	0
,, ,, ,, … …	2	,,	3	0	0	=	6	0	0
Rod: for the season … … … …	59	,,	0	15	0	=	44	5	0
,, for a month … … … …	7	,,	0	10	6	=	3	13	6
,, for a week … … … …	7	,,	0	5	0	=	1	15	0
,, for a day … … … …	13	,,	0	2	6	=	1	12	6
General Licences … … … …	1		…		…		1	1	0
Total … … … … … … …							68	7	0

OTHER THAN FOR SALMON.

			£	s.	d.		£	s.	d.
Rod: for the season … … … …	463	at	0	5	0	=	115	15	0
,, for a week … … … …	90	,,	0	2	6	=	11	5	0
,, for a day … … … …	158	,,	0	1	0	=	7	18	0
General Licences … … … …	1		…		…		1	1	0
Total … … … … … … …							135	19	0

16:—

FIRST OFFENCE.

Conviction.—Fishing with rod and line without a licence, 1.

THIRD OR SUBSEQUENT OFFENCE.

Convictions.—Illegally taking salmon by means of grappling, 2.

17.—Particular attention is drawn to the fact that the Conservators in the year 1912 submitted an application for a grant from the Development Fund. The application was referred to the Board of Agriculture and Fisheries whose Inspectors have visited the district and have been supplied with details as to the scheme proposed. My Board wish to impress the importance of a grant being made before June next so that the necessary improvements may be begun when the river is low.

18.—22nd March, 27th June, 26th September and 19th December at the Grand Jury Room, County Hall, Carnarvon.

DWYFACH DISTRICT.

1.—(*a.*) About the average. (*b.*) Below the average. (*c.*) Above the average in number and size.

3.—(*a.*) Though the season was comparatively dry, the take of Trout was more than the average and they were of larger size.

5.—(*a.*) 2 permanent: 1 temporary. Total, 3.

6.—The Board had under consideration the desirability of constructing a fish pass under Llanystnmdwy Bridge, but owing to the lack of funds the proposal fell through. However, in lieu of a fish pass, the Board decided to construct a low dam from the river bank above the left arch of the bridge to the edge of the arch, thus narrowing the bed of the river during droughts and providing a stronger flow of water under the arch. This appears to have answered the purpose very well, there being now plenty of water for the fish to run up under the bridge.

14:—

FOR SALMON.

		£	s.	d.		£	s.	d.
Draft or seine net (Public Waters)	2 at	5	0	0	=	10	0	0
Rod: for the season	10 "	1	1	0	=	10	10	0
" for a month	1 "	0	10	0	=	0	10	0
" for a week	3 "	0	5	0	=	0	15	0
" for a day	162 "	0	1	0	=	8	2	0
Total						29	17	0

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod: for the season	136 at	0	7	0	=	47	12	0
" for a month	39 "	0	5	0	=	9	15	0
" for a week	300 "	0	2	0	=	30	0	0
Total						87	7	0

18.—Quarterly; in February, May, August and November at the George Hotel, Criccieth.

DOVEY DISTRICT.

1.—(*a.*) and (*b.*) About the average. (*c.*) Good season.

3.—(*a.*) Good season—trout plentiful but rather small.

5.—(*a.*) 6 permanent; 1 temporary. (*b.*) 1 permanent. Total, 8.

8.—Yes.

12.—The Snowdon Copper Mine in Carnarvonshire was re-opened, and it was feared that injury might be caused to fisheries in the Upper Glaslyn.

13.—A Committee was appointed to enquire into the possible pollution of the Upper Glaslyn by the re-opening of the Snowdon Copper Mine, and the Clerk was directed to write to the Company to take every precaution to prevent pollution, and this proved successful.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Crib on the River Dulàs, owned by Lord Herbert Vane Tempest, Plas, Machynlleth.	1 at	10	0	0	=	10	0	0
Draft or seine net (Private Waters) ...	1 „	5	0	0	=	5	0	0
„ „ (Public Waters) ...	5 „	5	0	0	=	25	0	0
Rod : for the season	97 „	1	0	0	=	97	0	0
„ for a month	51 „	0	10	0	=	25	10	0
„ for a week	61 „	0	5	0	=	15	5	0
„ for a day	640 „	0	1	0	=	27	0	0
Total						204	15	0

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	2,142 at	0	1	0	=	107	2	0

16 :—

FIRST OFFENCE.

Convictions.—Catching salmon by means of a gaff, 1 ; fishing without a licence, 4 ; possession of gaff, 1 ; possession of spear, 1 ; fishing for trout in the close season, 10.

Acquittal.—Using illegal instrument, 1.

18.—Third Thursday in February, June, and October, at the Police Station, Barmouth at 12.30 p.m.

AYRON DISTRICT.

1.—(*a.*), (*b.*), and (*c.*) About the average.

2.—(*b.*) 20 Salmon, weighing 160 lbs. (exclusive of 664 Sewin, weighing 664 lbs.).

3.—(*a.*) About the average.

5.—(*a.*) 1 permanent ; 1 temporary.

8.—Yes.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Goryd (Public Waters)	1 at	1	0	0	=	1	0	0
Rod : for the season	31 „	0	10	0	=	15	10	0
„ for a fortnight	14 „	0	5	0	=	3	10	0
Total						20	0	0

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	116 at	0	2	6	=	14	10	0
„ for a month	133 „	0	1	0	=	6	13	0
Total						21	3	0

16 :—

FIRST OFFENCE.

Conviction.—Fishing without a licence, 1.

18.—Quarterly at Aberayron and Talsarn.

TEIFY DISTRICT.

1.—(*a.*), (*b.*), and (*c.*) Above the average.

2.—(*a.*) Salmon weighing 53,108 lbs. (*b.*) 297 salmon weighing 4,158 lbs. Total weight of fish, 57,266 lbs.

3.—(*a.*) and (*d.*) Above the average. (*c.*) and (*e.*) About the average.

4.—24 dead salmon have been reported, mostly male fish.

5.—(*a.*) 8 permanent.

6.—A new Dam has been built on the Shedi Brook, with fish-pass as prescribed by the Board of Agriculture and Fisheries. Arrangements made with Mr. William Daires the owner of the Stenfryn Mills on the said Brook, he being quite willing to do what was required.

8.—In a fairly good condition as I have been informed by the head water bailiff.

12.—No, neither has the head water bailiff informed me of any additional discharge of poisonous or deleterious matters into our rivers.

13.—Inspection by the Board of Agriculture and Fisheries and visits of the head water bailiff, with a view to inducing the mine owners to take measures to prevent pollution.

Partially but not sufficiently so.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Coracle net (Public Waters)	29 at	2	5	0	=	65	5	0
Draft or seine net (Public Waters) ...	1 "	8	0	0	=	8	0	0
" " " ...	14 "	5	0	0	=	70	0	0
Rod : for the season	95 "	1	0	0	=	95	0	0
" for a month	85 "	0	10	6	=	44	12	6
Total						282	17	6

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	1,481 at	0	2	6	=	185	2	6

16 :—

FIRST OFFENCE.

Convictions.—Fishing for salmon during the annual close season, 3 ; possession of unseasonable salmon, 1 ; fishing for salmon during the weekly close time, 5 ; using a gaff for catching salmon, 1 ; unlawfully taking a salmon by other means than a properly licensed instrument, 1 ; fishing for salmon, with rod and line without a licence, 1.

Acquittals.—Fishing for salmon during weekly close time, 4 ; using a spear for catching salmon, 3 ; using a light for the purpose of catching salmon, 2 ; fishing for trout with rod and line without a licence, 1 ; possession of gaff, 1.

SECOND OFFENCE.

Convictions.—Fishing for salmon during the annual close season, 2 ; possession of unseasonable salmon, 1 ; fishing for trout by means other than a properly licensed instrument, 1.

THIRD OR SUBSEQUENT OFFENCE.

Convictions.—Fishing for salmon during the annual close season, 2 ; using fish roe for fishing, 1.

Acquittal.—Possession of unseasonable salmon, 1.

18.—The third Fridays in March, June, September and December, at the Porth Hotel, Llandyssul, and the Salutation Hotel Newcastle Emlyn, alternately.

CLEDDY DISTRICT

1.—(*a.*) Very good.

3.—(*a.*) Poor.

5.—(*a.*) 1 permanent

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Coracle net (Public Waters)	2 at	1	0	0	=	2	0	0
Draft or Seine net (Public Waters)	1 ,,	3	0	0	=	3	0	0
Rod : for the season	27 ,,	0	10	6	=	14	3	6
Total						19	3	6

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	276 at	0	3	6	=	48	6	0
,, for a week	4 ,,	0	2	6	=	0	10	0
,, for a day	15 ,,	0	1	0	=	0	15	0
Total						49	11	0

16 :—

FIRST OFFENCE.

Acquittals.—Fishing for Trout with rod and line without a licence, 3.

18.—When required at the Shire Hall, Haverfordwest.

TOWY DISTRICT.

1.—(*a.*) Salmon above the average, but trout below the average. (*b.*) Salmon above the average, but trout about the average. (*c.*) About the average.

3.—(*a.*) Poor. (*d.*) About the average.

5.—(*a.*) 7 permanent; 2 temporary. (*b.*) 3 permanent. Total, 12.

6.—The weir on the Crychian was re-built and a fish-pass provided.

8.—Yes.

13.—The usual steps were taken.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Coracle net (Private Waters)	5 at	1	1	0	=	5	5	0
,, (Public Waters)	5 ,,	1	1	0	=	5	5	0
,, (Public Waters)	24 ,,	2	2	0	=	50	8	0
Lamp net (Public Waters)	2 ,,	1	0	0	=	2	0	0
Wade net (Public Waters)	1 ,,	1	0	0	=	1	0	0
,, (Public Waters)	1 ,,	0	15	0	=	0	15	0
,, (Public Waters)	2 ,,	0	10	0	=	1	0	0
,, (Public Waters)	23 ,,	0	5	0	=	5	15	0
Draft or seine net (Public Waters)	13 ,,	4	0	0	=	52	0	0
,, (Public Waters)	6 ,,	0	12	6	=	3	15	0
Rod : for the season	155 ,,	1	1	0	=	162	15	0
General Licences	6 ,,	3	3	0	=	18	16	0
Total						308	16	0

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	2,774 at	0	2	6	=	346	15	0

16 :—

FIRST OFFENCE.

Convictions.—Fishing with rod without a licence, 6 ; fishing in close season, 1 ; fishing with night lines, 1 ; fishing with unlicensed instrument, 5 ; using a snare, 1 ; possession of light, 1.

Acquittals.—Possession of snare, 1 ; fishing with unlicensed instrument, 1 ; possession of light, 2.

SECOND OFFENCE.

Conviction.—Fishing for trout with unlicensed instrument, 1

THIRD OR SUBSEQUENT OFFENCE.

Conviction.—Possession of spear, 1.

18.—Last Friday in January. Third Wednesday in April, July and October at the Shire Hall Carmarthen.

OGMORE DISTRICT.

3.—(*a.*) Poor. (*c.*) Scarce. (*d.*) Numerous.

5.—(*a.*) 4 permanent.

12.—There do not appear to be any new sources of pollution, but no improvement has taken place since last year.

13.—Further representations have been made to the Maesteg Council but they do not appear to have made any real improvement and their sewage is still a serious pollution.

14 :—

FOR SALMON.

		£	*s.*	*d.*		£	*s.*	*d.*
Rod : for the season	5 at	0	10	6	=	2	12	6

OTHER THAN FOR SALMON.

		£	*s.*	*d.*		£	*s.*	*d.*
Rod : for the season	252 at	0	2	0	=	25	4	0

16 :—

FIRST OFFENCE.

Conviction.—Permitting poisonous matter to flow into River Ogmore so as to kill fish, 1.

18.—None fixed.

TAFF AND ELY DISTRICT.

3.—(*a.*) Fish plentiful in the Ely, but a bad fly-fishing season owing to drought. (*e.*) A poor Roach season.

5.—(*a.*) 1 permanent. (*b.*) 5 permanent. Total, 6.

12.—The Taff is much polluted. The Ely was also periodically polluted from works in the district of Llantrisant.

14 :—

FOR SALMON.

		£	*s.*	*d.*		£	*s.*	*d.*
Rod : for the season	302 at	0	2	6	=	37	15	0

16 :—

FIRST OFFENCE

Convictions.—Fishing without a licence, 2.

Withdrawn.—Fishing without a licence, 2.

18.—First Saturday in February, at 17, Church Street, Cardiff.

RHYMNEY DISTRICT.

3.—(*a.*), (*d.*), and (*e.*) Below the average.

5.—(*a.*) 1 temporary. (*b.*) 6 permanent. Total, 7.

13.—Periodical inspections are made by the water bailiff, and the owners of works and collieries and local authorities are constantly pressed to deal with pollutions so as to make the effluent innocuous to fish life. The Local Authorities, however, are naturally loth to do anything to extend their present sewerage systems, as, under the Rhymney Valley Sewerage Board Act, 1912, the different Urban Districts will gradually be linked up with the Main Trunk Sewer. This, it is hoped, will deal effectively with the sewage, which badly pollutes the river. We are pleased to report that there has at last been an improvement in the pollution by waste acid from the Waterloo Tinplate Works consequent upon pressure from the Board of Agriculture and Fisheries.

14 :—

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	101 at	0	1	0	=	5	1	0

18.—None fixed. A meeting is held once a year at Newport, usually at the beginning of the year.

USK DISTRICT.

1.—(*a.*), (*b.*), and (*c.*) About the average.

2.—(*a.*) (including putts and putchers) 2,184 salmon, weighing 28,721½ lbs. (*b.*) 1,047 salmon, weighing 13,756 lbs. Total, 3,231 salmon, weighing 42,477½ lbs.

3.—(*a.*) Below the average. (*d.*) and (*e.*) About the average.

4.—Considering the low state of the river during the summer and autumn very few cases of disease were reported. The following were the dates on which five dead salmon were removed from the river, and buried, viz. :—May 22nd at Buckland, May 24th at Pantygoitre, June 12th and July 3rd at Usk. At the end of August, during the time of the drought, a considerable number of dead salmon were seen in the river which showed upon examination no signs of disease. These fish were found in the tidal portion of the river and the probability is that owing to the low state of the river they were killed by sewage and other pollution, or death resulted from furunculosis.

5.—(*a.*) 14 permanent; 3 temporary. (*b.*) 20 permanent. Total, 37.

8.—Yes, but as pointed out last year, salmon and especially trout have difficulty in ascending Millbrook Weir on the Grwyney Fawr. This, however, may not be a disadvantage, having regard to the fact that large waterworks are now in course of construction in the upper waters of the Grwyney Fawr, so that until these works are completed it will probably be advisable not to encourage fish to go up the Weir. Neither has anything been done to make it easier for salmon to pass up the weir at Crickhowell Bridge.

13.—The different sources of pollution are constantly visited by the water bailiffs, and the owners of works and collieries and also the local authorities are pressed to deal effectively with the effluent, and there is a continued abatement of pollution by acid and coal dust. The pollution by sewage still continues very unsatisfactory, Crickhowell and Brynmawr being bad sources, although there are at last some signs of improvement in the future in both cases, as proposals for new sewerage works are on foot. The towns and villages on the tributary, Avon Llwyd, continue to send their sewage into that river in an absolutely crude state. A Sewage Board was formed for this Valley under the Eastern Valleys Sewage Act, 1912, but they have not yet formulated a scheme for dealing effectively with the sewage. As regards the Western Valleys (the River Ebbw and tributaries) there is still a considerable amount of sewage passing into the river, but this will gradually disappear when the subsidiary schemes of the different Councils are linked up, with the main trunk sewer which runs into the Bristol Channel. Nothing whatever has been done towards dealing with the large amount of sewage from Newport and although the pollution is mainly in the neighbourhood of the mouth of the river, and, therefore, in tidal water, it is obvious that in times of drought, it must act as a serious deterrent to fish endeavouring to go up the river.

14 :—

FOR SALMON.

			£	s.	d.			£	s.	d.
Putts (Private Waters)	247	at	0	2	6		=	30	17	6
Putchers or Butts (Private Waters)...	3,300	„	1	10	0	per 50	=	99	0	0
Stop or compass net (Private Waters)	5	„	7	10	0		=	37	10	0
Rod : for the season	139	„	1	10	0		=	208	10	0
„ for a fortnight	112	„	0	10	0		=	56	0	0
Total								431	17	6

OTHER THAN FOR SALMON.

			£	s.	d.		£	s.	d.
Rod : for the season	1,441	at	0	2	6	=	180	2	6

15.—Yes ; the rate was 5*s.* in the £ on a rateable value of £3,715 12*s.* 0*d.* The net amount realised to the 31st December, 1913, was £929 3*s.* 0*d.*

16 :—

FIRST OFFENCE.

Convictions.—Possession of gaff and aiding and abetting, 3 ; possession of unseasonable trout, 1 ; taking unseasonable trout, 1 ; using a net capable of catching salmon without a licence, 5 ; possession of salmon pink, 1 ; buying unseasonable salmon, 1 ; being in possession of unseasonable salmon, 1.

Acquittal.—Having a light in his possession for the purpose of taking salmon., 1.

THIRD OR SUBSEQUENT OFFENCE.

Convictions.—Possession of gaff, 1 ; assaulting a water bailiff, 1 ; possession of unseasonable salmon, 2 ; fishing during prohibited hours, 4 ; being in possession of salmon roe, 5 ; fishing without a licence, 2 ; taking salmon with a gaff during prohibited season, 1.

17.—No. Except that the expense to which the Board is put nearly every year, in having to oppose applications to Parliament which are made, (1) for the purpose of diverting the natural supply of water from the river for waterworks, &c., and (2) for incomplete sewerage schemes (*i.e.*, schemes which do not propose to deal with the sewage effluent bacteriologically as well as sedimentarily), is becoming a very serious matter.

18.—Second Thursday in the months of January and May, and third Thursday in the month of September.

WYE DISTRICT.

1.—(*a.*), (*b.*), and (*c.*) Above the average.

2.—(*a.*) 6,408 salmon, weighing 83,686¾ lbs. ; (*b.*) 3,538 salmon, weighing 61,504¼ lbs. Total, 9,946 salmon, weighing 145,191 lbs.

3.—(*a.*) Below average in rivers. Above average in Birmingham Water Company's reservoirs.

4.—Salmon and other fish were attacked by disease, but to nothing like the same extent as in previous years. The total number of dead salmon reported to the office was 189, of which 120 showed no signs of disease and 69 had "Fungus" on them. There was no noticeable mortality in the tidal waters.

5.—(*a.*) 12 permanent ; 11 temporary. (*b.*) 28 permanent. Total, 51.

8.—A small repair to the lower fish pass at Rhayader has been recommended and will be carried out in the summer of 1914.

14 :—

FOR SALMON.

			£	s.	d.			£	s.	d.
Putchers or Butts (Private Waters) ...	750	at	1	10	6	for 50	=	22	17	6
Stop or compass net (Private Waters)	19	„	5	0	0		=	95	0	0
Haaf, Heave, or Lave net (Private Waters)	3	„	2	0	0		=	6	0	0
Tuck net (Private Waters)	2	„	35	0	0		=	70	0	0
„ „ „	4	„	30	0	0		=	120	0	0
„ „ „	2	„	25	0	0		=	50	0	0
Rod : for the season	312	„	1	10	0		=	468	0	0
„ „ „ (Upper Waters)	10	„	0	15	0		=	7	10	0
„ for a month	49	„	1	0	0		=	49	0	0
„ for a week	211	„	0	10	0		=	105	10	0
Total								993	17	6

OTHER THAN FOR SALMON.

			£	s.	d.		£	s.	d.
Rod : for the season (trout)...	1,273	at	0	2	6	=	159	2	6
„ for the season (freshwater fish) ...	1,158	„	0	1	0	=	57	18	0
„ for a month (trout)	1,832	„	0	1	0	=	91	12	0
Total							308	12	6

15.—Yes, 5*s.* in the £, realising £1,301 11*s.* 10*d.*

16 :—

FIRST OFFENCE.

Convictions.—Fishing for trout with salmon roe, 1 ; placing lime in brook, 2 ; killing trout with an "otter," 1 ; netting for trout, 7 ; catching salmon parr, 1 ; assaulting water bailiff, 3 ; in possession of gaff, 1 ; in possession of unclean salmon, 2.

Acquittals.—Placing lime in brook, 1 ; gaffing salmon, 1 ; assaulting water bailiff, 2 ; possession of gaff, 1.

17.—Poaching by organized gangs of 30 to 40 men has been on the increase during the spawning season of 1913 in the Ithon district, the other spawning grounds being rather below the average in that respect. A dastardly outrage was committed at Penybont in November, when the bedroom windows of the houses in which the bailiffs lodged were blown in by a shot gun. A reward of £25 was offered for information leading to conviction of offender, without result.

18.—February 18th, 1914 ; May 20th, 1914 ; October 21st, 1914.

SEVERN DISTRICT.

1.—(*a.*) Slightly above average of recent years. (*b.*) Best season on record during the last 30 years. (*c.*) Above average.

2.—(*a.*) 25,375 salmon. (*b.*) 125 salmon. Total, 25,500 salmon.

3.—(*a.*) Variable but good where trout are protected. (*c.*) Reports do not disclose that it has been otherwise than a moderate year. (*d.*) Bad but probably caused by the absence of good water in the early autumn. (*e.*) The average angler has had but poor catches while the more experienced have done well.

4.—Not beyond a few isolated fish. Disease has appeared during January, 1914, in several pools at foot of weirs where the fish have been detained in numbers through want of a freshet.

5.—(*a.*) 19 permanent. (*b.*) 104 permanent. Total, 123.

7.—Several passes have been improved in weirs in Montgomeryshire, but no great structural alterations have been made.

8.—Structurally yes, but some are inefficient.

12.—A new Company has been formed for dealing with the sludge from the Van Mine The effluent has polluted the stream into which it flows, but no dead fish have yet been seen. The effluent will kill fish when diluted with eight times amount of water. The Company are making settling pits.

13.—Gloucester sewage scheme will probably affect the travelling fish and keep them from using Llanthony Weir.

14 :—

FOR SALMON.

		£	s.	d.			£	s.	d.
Putts (Private Waters)	256 at	0	2	6		=	32	0	0
„ (Private Waters)	80 „	0	1	0		=	4	0	0
Putchers or Butts (Private Waters) ...	5,930 „	1	0	0	per 50	=	120	0	0
Stop or Compass net (Private Waters)	12 „	3	0	0		=	36	0	0
Outriggers and leaders (Private Waters)	4 „	various				=	25	0	0
„ (Private Waters)	12 „	1	0	0					
Haaf, Heave, or Lave net (Private Waters)	153 „	1	10	0		=	229	10	0
„ (Public Waters)	15 „	1	10	0		=	22	10	0
Draft or seine net (Private Waters) ...	9 „	5	0	0		=	45	0	0
„ (Private Waters) ...	7 „	4	0	0		=	28	0	0
„ (Private Waters) ...	1 „	2	0	0		=	2	0	0
„ (Private Waters) ...	11 „	1	1	0		=	11	11	0
„ (Public Waters) ...	8 „	3	0	0		=	24	0	0
„ (Public Waters) ...	14 „	2	0	0		=	28	0	0
Rod: for the season	76 „	0	10	0		=	38	0	0
Total							645	11	0

OTHER THAN FOR SALMON.

		£	s.	d.			£	s.	d.
Bait net	4 at	0	2	6		=	0	10	0
Draft and bush net	7 „	0	10	0		=	3	10	0
Putcheons	720 „	0	5	0	per 20	=	9	0	0
Weir traps	19 „	0	15	0		=	14	5	0
Night lines	23 „	0	10	0		=	11	10	0
Eel net	65 „	0	5	0		=	16	5	0
Rod: for the season (whole of District)	1,340 „	0	2	6		=	167	10	0
„ „ (above Lincombe Weir and in the Teme)	3,640 „	0	2	0		=	364	0	0
„ „ (Below Lincombe Weir)	19,165 „	0	0	6		=	479	2	6
Total							1,065	12	6

16 :—

FIRST OFFENCE.

Convictions.—Taking salmon during weekly close time, 1; taking salmon during annual close season, 1; having salmon in possession for sale during annual close season, 1; fishing for freshwater fish with a rod and line without a licence, 39; fishing for freshwater fish in close season, 12; taking undersized freshwater fish contrary to Bye-law, 11; using a night-line without a licence, 6; using a net for catching freshwater fish without a licence, 3; using an illegal net for taking freshwater fish, 1; using spears for catching trout, 3; attempting to catch freshwater fish by means of a wire, 1; catching freshwater fish by means of a wire, 1; putting lime in Penylan Brook to kill fish, 1.

Acquittals.—Taking salmon during weekly close time, 1; using illegal fixed engines, 1; using illegal instrument for killing salmon, 1; fishing for freshwater fish with rod and line without a licence, 5; fishing for freshwater fish in close season, 1; using a night line without a licence, 4; groping for fish, 2.

Withdrawn.—Fishing for salmon with net without licence, 3; fishing for freshwater fish with rod and line without a licence, 2.

18.—First Thursday in the months of February, June, and October at the Council House, Birmingham.

AVON, BRUE AND PARRET DISTRICT.

1.—(*a.*), (*b.*) and (*c.*) About average.

3.—(*a.*), (*b.*), (*c.*), (*d.*), and (*e.*) The floods in the early part of the season and the drought in the latter part of the season seriously interfered with the fishing.

5.—(*a.*) 12 permanent. (*b.*) 25 permanent. Total, 37.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Putchers or Butts (Private Waters) ...	498 at	0	10	0 for 49	=	5	0	0
Dip net (Public Waters)	10 „	0	10	0	=	5	0	0
General Licences	4	...	...	...		5	3	0
Total						15	3	0

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	252 at	0	5	0	=	63	0	0
„ „	454 „	0	2	6	=	56	15	0
„ for a month	65 „	0	2	6	=	8	2	6
„ „	146 „	0	1	0	=	7	6	0
„ for a day...	128 „	0	1	0	=	8	8	0
„ „	129 „	0	0	6	=	3	4	8
Total						144	16	0

16 :—

FIRST OFFENCE.

Convictions.—Attempting to take trout by means of a night line without a licence, 1; taking trout without a licence, 2; taking a salmon without a licence, 1.

Withdrawn.—Lading or bailing out a brook or watercourse, 2; fishing for freshwater fish in close time, 1.

SECOND OFFENCE.

Acquittal.—Using a net to catch freshwater fish contrary to Bye-law, 1.

18.—October, 1914, at Bath.

TAW AND TORRIDGE DISTRICT.

1.—(*a.*) and (*b.*) Above the average.

3.—(*a.*) Not so good this season.

4.—Numbers of salmon were found dead from, it was believed, some mysterious disease, and several fish were forwarded to London for examination.

5.—(*a.*) 5 permanent; 1 temporary. Total, 6.

8.—Yes.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Box at Umberleigh (Private Waters) ...	1 at	9	12	0	=	9	12	0
Weir at Lynmouth (Private Waters) ...	1 „	9	12	0	=	9	12	0
Draft or seine net (Public Waters)	28 „	4	0	0	=	104	0	0
Rod : for the season	237 „	1	4	0	=	284	8	0
Total						407	12	0

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	386 at	0	5	0	=	96	10	0
„ for a week	1,293 „	0	1	0	=	64	13	0
Total						161	3	0

16 :—

First Offence.

Convictions.—Refusing to allow search, 1; possession of unseasonable salmon, 4; possession of illegal instrument, 5; fishing for salmon in weekly close time, 1; disturbing spawning beds, 5; taking unseasonable salmon, 1; fishing in annual close season, 2; assaulting water bailiff, 2; fishing for trout without licence, 8; taking unclean salmon, 1; using illegal instrument, 3; using illegal net, 1.

Acquittals.—Possession of unseasonable salmon, 1; possession of illegal instrument, 1; using illegal instrument, 2; fishing in annual close season, 1; using net contrary to byelaw, 1.

Second Offence.

Convictions.—Using illegal net, 2; fishing for salmon in weekly close time, 8.

18.—Second Friday after each Devon Quarter Sessions, and the first or second Friday immediately preceding Christmas Day, at the Guildhall, Barnstaple.

CAMEL DISTRICT.

1.—(*a*.) Above the average; (*b*.) below the average.

3.—(*a*.) Much below the average in consequence of the drought.

5.—(*a*.) 1 permanent; 1 temporary. (*b*.) 6 permanent (honorary). Total, 8.

8.—Yes.

12.—Frequent intermittent pollution by clay works at Stannon Moor near St. Breward and from the driers have been reported.

13.—Catch pits have been constructed at Stannon Moor, but with heavy surface floods they either overflow or burst their banks, and are only partially effective.

14 :—

For Salmon.

		£	s.	d.		£	s.	d.
Hang or drift net (Public Waters)	7 at	2	0	0	=	14	0	0
„ „	4 „	2	0	0	=	8	0	0
Rod: for the season	44 „	0	15	0	=	33	0	0
„ fortnightly	29 „	0	5	0	=	7	5	0
Total						62	5	0

Other than for Salmon.

		£	s.	d.		£	s.	d.
Rod: for the season	124 at	0	5	0	=	31	0	0
„ fortnightly	49 „	0	2	6	=	6	2	6
Total						37	2	6

18.—Bodmin, when necessary.

FOWEY DISTRICT.

1.—(*a*.) About the average. (*b*.) Below the average.

5.—(*a*.) 1 permanent; 4 temporary. Total, 5.

8.—Yes.

12.—A new clay dry has been erected near Bodmin Road Station.

13.—Complaints have been made to the companies.

14 .—

FOR SALMON.

		£	s.	d.		£	s.	d.
Hang or drift net (Public Waters)	11 at	0	5	0	=	2	15	0
Draft or seine net (Public Waters)	6 ,,	2	10	0	=	15	0	0
Rod : for the season	27 ,,	0	15	0	=	20	5	0
,, for a month	8 ,,	0	6	0	=	2	8	0
Total						40	8	0

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	350 at	0	5	0	=	87	10	0

17.—The difficulty of protecting the fish unless there is conferred on the Board the right to prevent mines or other works from sending deleterious matter into the river.

18. —Quarterly, or when required.

TAMAR AND PLYM DISTRICT.

1.—(*a*.) Above the average. (*b*.) About the average.

3.—(*a*.) About the average.

5.—(*a*.) 5 permanent; 2 temporary. (*b*.) 8 permanent; 1 temporary. Total, 16.

6.—Horrabridge Dam on the River Walkham was partly rebuilt. Two gaps have been left open, one of which it is intended to use as the intake for a mill-wheel. The other will be used as the site of a fish pass.

The miller has been informed of, and admits his obligation to build a fish pass. Plans have been submitted by him to the Board of Agriculture and Fisheries.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Draft or seine net (Private Waters) ...	1 at	3	10	0	=	3	10	0
Ditto (Public Waters)	23 ,,	3	10	0	=	80	10	0
Rod : for the season	223 ,,	0	10	0	=	111	10	0
Total						195	10	0

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	759 at	0	2	6	=	94	17	6
,, for a day	101 ,,	0	1	0	=	5	1	0
Total						99	18	6

18.—Annual Meeting at Tavistock on the second Thursday in February. Other meetings alternatively at Plymouth and Tavistock, as necessary.

AVON (DEVON) DISTRICT.

1.—(*a*.), (*b*.) and (*c*.). Above the average.

3.—(*a*.) About the average.

4.—Not to an appreciable extent.

5.—(*a*.) 1 permanent; 1 temporary. Total, 2.

8.—Yes.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Box, crib, or cruive (Private Waters) ...	1 at	10	0	0	=	10	0	0
Draft or seine net (Private Waters) ...	3 „	5	0	0	=	15	0	0
Hand net (Private Waters)	1 „	1	0	0	=	1	0	0
Rod : for the season	13 „	1	0	0	=	13	0	0
Total						39	0	0

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	99 at	0	10	0	=	49	10	0
„ for a week	23 „	0	5	0	=	5	15	0
„ for a day...	50 „	0	2	0	=	5	0	0
Total						60	5	0

16 :—

FIRST OFFENCE.

Conviction.—Attempting to take salmon, 1.

SECOND OFFENCE.

Conviction.—Attempting to take salmon, 1.

18.—Quarterly, at South Brent and Kingsbridge.

DART DISTRICT.

1.—(*a.*), (*b.*) and (*c.*) Above the average.

2.—(*a.*) 4,225 salmon, weighing 43,872 lbs. (*b.*) 397 salmon, weighing 4,951 lbs. Total, 4,622 salmon, weighing 48,823 lbs.

3.—(*a.*) Poor. (*d.*) Numerous.

4.—A few cases were reported.

5.—(*a.*) 4 permanent ; 1 temporary Total, 5.

6.—The sum of £26 16s. 1*d.* was spent in repairing the Kilbury fish pass which is now in a good state of repair.

8.—Yes.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Draft or seine net (Private Waters)... ...	2 at	5	0	0	=	10	0	0
Ditto (Public Waters)	20 „	5	0	0	=	100	0	0
Rod : for the season	153 „	1	0	0	=	153	0	0
„ for a week	103 „	0	7	6	=	38	12	6
„ for a day	36 „	0	2	6	=	4	10	0
Total						306	2	6

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	255 at	0	10	0	=	127	10	0
„ for a month	238 „	0	5	0	=	59	10	0
„ for a day...	155 „	0	2	0	=	15	10	0
Total						202	10	0

16 :—

FIRST OFFENCE.

Conviction.—Fishing for trout without a licence, 1.

18.—The Monday before the fourth Tuesday in each month, at Totnes.

TEIGN DISTRICT.

1.—(*a.*) Above the average (*b.*) and (*c.*) About the average.

2.—(*a.*) 745 salmon, weighing 7,027 lbs.; 519 migratory trout, weighing 1,617 lbs. (*b.*) 89 salmon, weighing 879 lbs.; 308 migratory trout, weighing 805 lbs. Total fish, 1,661, weighing 9,828 lbs.

3.—(*a.*) Below the average.

4.—Several salmon, sea trout and trout died from furunculosis up to June, but at the end of that month the disease disappeared and did not re-appear.

5.—(*a.*) 2 permanent; 1 temporary. Total 3.

8.—Yes.

12.—All the fish in the River Lemon were killed by pollution from Stormsdown Mine. It is understood that the mine is now being abandoned, and arrangements have been made with the owners of the mine to re-stock the river.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Draft or seine net (Public Waters)	10 at	5	0	0	=	50	0	0
Fixed net (Public Waters)	17 „	1	0	0	=	17	0	0
Rod : for the season	80 „	1	0	0	=	80	0	0
„ for a day...	74 „	0	2	0	=	7	8	0
Total						154	8	0

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	279 at	0	5	0	=	69	15	0
General Licence	1	...		...		2	2	0
Total						71	17	0

18.—Quarterly meetings are held at the Clerk's Offices, 19, Market Street, Newton Abbot.

EXE DISTRICT.

1.—(*a.*), (*b.*) and (*c.*). Above the average.

2.—(*a.*) 5,078 salmon, weighing 46,447 lbs. (*b.*) 813 salmon, weighing 8,031 lbs. Total, 5,891, weighing 54,478 lbs.

3.—A poor season with regard to the lower parts, but a favourable one with regard to the higher parts of the river.

4.—Cases have occurred of salmon having died from Salmon Fungus and also cases of fish affected by B. salmonicida (furunculosis).

5.—(*a.*) 4 permanent; 1 temporary. Total, 5.

12.—The same causes of pollution exist as have existed for some years, notably in the case of the Culme.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Draft or seine net (Private Waters) ...	1 at	5	0	0	=	5	0	0
Ditto (Public Waters)	31 „	3	10	0	=	108	10	0
Rod : for the season	96 „	1	10	0	=	144	0	0
„ for a week	49 „	0	7	6	=	18	7	6
Total						275	17	6

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	643 at	0	5	0	=	160	15	0
„ for a week	310 „	0	2	6	=	38	15	0
„ for a day	197 „	0	1	0	=	9	17	0
Total						209	7	0

15.—Yes. At 2*s.* 6*d.* in the £. Amount realised £167 16*s.* 3*d.*

16 :—

FIRST OFFENCE.

Convictions.—Fishing for trout without a licence, 2 ; taking freshwater fish in close time, 2 ; unlawfully using wire or snare for catching a salmon, 1 ; unlawfully using a gaff for catching a salmon, 1 ; taking the young of salmon, 1.

SECOND OFFENCE.

Convictions.—Taking a salmon by other means than a properly licensed instrument, to wit, a gaff 3.

18.—When and where required.

AXE DISTRICT.

1.—(*a.*), (*b.*) and (*c.*) Above the average during whole season.

3.—(*a.*) Good in early part of season.

5.—(*a.*) 1 permanent. (*b.*) 9 permanent. Total, 10.

8.—A portion of the lower tub at the Westwater fish-pass again requires a little repair, and the owner or his agent has been notified of the defect.

13.—Steps are being taken by the proper Local Authority to prevent the sewage of Axminster Town from entering the river Axe.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Draft or seine net (Private Waters)	2 at	5	0	0	=	10	0	0
Rod : for the season	47 „	0	10	0	=	23	10	0
Total						33	10	0

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	234 at	0	2	6	=	29	5	0

18.—Ordinary meetings held quarterly the second Tuesday in the months of February, May, August and November, at 10.15 a.m. during the winter months, and 10.30 a.m. during the summer months, at the Clerk's offices, Silver Street, Axminster.

FROME DISTRICT.

1.—(*a.*), (*b.*) and (*c.*) Salmon above the average.

2.—(*a.*) 173 salmon, weighing 2,657 lbs. (*b.*) 110 salmon, weighing 1,660 lbs. Total, 283 salmon, weighing 4,317 lbs.

5.—(*a.*) 1 permanent ; 11 temporary. Total, 12.

8.—No, the ladder at East Stoke Mill is practically useless.

13.—No steps taken other than writing to the Wareham Gas Co. as to discharge from works.

It is hoped so.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Draft or seine net (Private Waters)	1 at	5	0	0	=	5	0	0
Rod : for the season	29 „	1	0	0	=	29	0	0
Total						34	0	0

18.—None fixed.

HAMPSHIRE RIVERS DISTRICT.

1.—(*a.*), (*b.*) and (*c.*) Salmon, above the average. Migratory trout, below the average.

2.—(*a.*) 1,466 salmon. (*b.*) 585 salmon. (*a.*) and (*b.*) 587 migratory trout. Total 2,638 fish.

5.—(*a.*) 4 permanent. (*b.*) 20 temporary. Total, 24.

8.—Yes, with the exception of Throop, in the River Stour, plans for the rebuilding of which are in course of preparation for submission to the Board of Agriculture and Fisheries.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Knapp Fishing Weir (Private Waters) ...	1 at	12	0	0	=	12	0	0
Draft or seine net (Private Waters) ...	3 „	4	0	0	=	12	0	0
„ „ (Public Waters)	10 „	4	0	0	=	40	0	0
Rod : for the season	100 „	1	10	0	=	150	0	0
General Licences	6 ...		...		...	73	0	0
Total						287	0	0

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d
Drag net	3 at	0	7	6	=	1	2	6
Stop net...	3 „	0	1	0	=	0	3	0
Rod : for the season	13 „	0	10	0	=	6	10	0
„ „	224 „	0	5	0	=	56	0	0
„ for a month	10 „	0	5	0	=	2	10	0
„ „	34 „	0	2	6	=	4	5	0
„ for a week	12 „	0	2	6	=	1	10	0
„ „	217 „	0	1	0	=	10	17	0
General Licences	5 ...		...		...	4	10	0
Total						87	7	6

16 :—

FIRST OFFENCE.

Convictions.—Fishing without a licence, 2.

18.—The annual meeting 9th February, 1914; the second meeting 3rd July, 1914; the third meeting 23rd October, 1914. At the Council Chamber, Southampton.

ADUR DISTRICT.

3.—(*a.*), (*d.*), and (*e.*) About the average.

5.—(*b.*) 4 permanent.

14 :—

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	25 at	0	1	0	=	1	5	0

18.—Town Hall, Brighton, when required.

OUSE (SUSSEX) DISTRICT.

3.—(*d.*) and (*e.*) About the average.

5.—(*b.*) 1 permanent.

8.—Yes.

13.—The works in connection with the new sewage scheme for the town of Lewes are in progress, but have not yet been completed.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Haaf, heave, or lave net (Private Waters) ...	1 at	2	5	0	=	2	5	0

18.—Whenever necessary, at the office of the Clerk.

CUCKMERE DISTRICT.

3.—(*a.*) Fair. (*c.*) A few caught. (*d.*) Not plentiful. (*e.*) Plentiful.
5.—(*b.*) 5 permanent.
13.—A sewage pollution has been reported from the village of Heathfield and is under consideration.
14 :—

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season … … … …	184 at	0	1	0	=	9	4	0

17.—200 grayling were turned into the river at Hellingly in March, 1912, a few have been caught both above and below the spot at which they were turned in.
18.—January, Junction Hotel, Polegate.

ROTHER DISTRICT.

3.—(*d.*) Considerable quantity. (*e.*) Fair quantity.
5.—(*a.*) 8 permanent. (*b.*) 2 permanent. Total, 10.
14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Keddle nets (Public Waters) … …	39 at	0	2	6	=	4	17	6

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Net … … … … … …	1 at	1	10	0	=	1	10	0
Rod : for the season … … … …	341 „	0	1	0	=	17	1	0
Total … … … … … … …						18	11	0

18.—January. Cinque Ports Hotel, Rye ; July, Railway Hotel, Northiam.

SUFFOLK AND ESSEX DISTRICT.

3.—(*a.*) Very few. (*d.*) and (*e.*) About the average.
5.—(*b.*) About 60 permanent.
8.—Yes.
18.—When required, at County Hall, Ipswich.

NORFOLK DISTRICT.

3.—(*d.*) About the average. (*e.*) Fair average except on the Yare, where sport was moderate.
5.—(*a.*) 1 permanent, 1 temporary ; (*b.*) 8 permanent. Total, 10. We are appointing several honorary bailiffs.
14 :—

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : house licences … … … …	8 at	1	1	0	=	8	8	0
„ for the season … … … …	4,279 „	0	1	0	=	213	19	0
„ for a week … … … …	1,347 „	0	0	6	=	33	13	6
„ for a day … … … …	4,580 „	0	0	3	=	57	5	0
Total … … … … … … …						313	5	6

16 :—

FIRST OFFENCE.

Convictions.—Using a drag net in the river Yare, 2 ; smelt fishing in close time on Breydon Water, 4.
18.—Meetings held at the Shire Hall, Norwich, as required.

NORFOLK AND SUFFOLK DISTRICT.

18.—On a Saturday in January or February, at the Shirehall, Norwich.

OUSE AND NENE DISTRICT.

17.—The Conservators of the Ouse and Nene Fishery District have not met since 1888, and there is nothing to report upon for the year 1913.

WELLAND DISTRICT.

3.—(*a*) A few brown trout were caught in the Glenn and Gwash tributaries of the Welland. (*c*) A few grayling have been caught in the Gwash, having been put in by the Stamford Angling Society. (*d*) Eels not so plentiful as formerly, every water mill, of which there are many, having an eel trap. (*e*.) Tolerably plentiful. Pike very plentiful. Perch not so plentiful as formerly.

WITHAM DISTRICT.

3.—(*a*.) Very poor. (*d*.) Not so many as in previous years. (*e*.) Fairly good catches considering that the water in the streams has been low.

5.—(*b*.) 2 permanent; 1 temporary. Total, 3.

12.—No, but the Sincil Dyke (a stream running through Lincoln and falling into the Witham at Bardney) is often polluted with oily matter which finds its way into the River Witham and in a dry time is very objectionable to Anglers.

14:—

OTHER THAN FOR SALMON.

		£ s. d.		£ s. d.
Rod: for the season	15 at	0 2 6	=	1 17 6

18.—No dates fixed.

TRENT DISTRICT.

2.—(*a*.) 9 salmon weighing 108 lbs.

3.—(*a*.) Below the average, owing to the dry season. (*c*.) Good. (*d*.) and (*e*.) Below the average.

5.—(*a*.) 1 permanent; 1 temporary. (*b*.) 50 permanent. Total 52.

8.—New passes are required at Tutbury (on the Dove) and Wilne Mill (on the Derwent.)

12.—Yes, Nestle's Milk Factory at Ashbourne which has made the River Henmore exceedingly filthy.

13.—Factory owners and local authorities generally are taking more energetic steps than formerly to prevent pollution.

14.—

FOR SALMON.

		£ s. d.		£ s. d.
Draft or Seine net (Private Waters) ...	1 at	5 0 0	=	5 0 0
Rod: for the season	1 „	0 10 0	=	0 10 0
Total				5 10 0

OTHER THAN FOR SALMON.

		£ s. d.		£ s. d.
Draft nets	6 at	0 10 0	=	3 0 0
Rod: for the season	2,668 „	0 2 6	=	333 10 0
„ for a week	589 „	0 1 0	=	29 9 0
Total				365 19 0

16 :—

FIRST OFFENCE.

Convictions.—Shooting trout, 1 ; aiding and abetting the above, 1.

17.—Some of our rivers are much polluted from various works, and the Rivers Pollution Act is of very little use. Funds are required for improving old, and erecting new fish passes.

18.—As required.

YORKSHIRE DISTRICT.

1.—(*a.*) About the average. (*b.*) and (*c.*) Above the average.

2.—(*a.*) 812 salmon, weighing 12,116 lbs. ; 1,370 migratory trout, weighing 5,225 lbs. (*b.*) 29 salmon, weighing 418 lbs. Total, 2,211 fish, weighing 17,759 lbs.

3.—(*a.*) Good to end of May, but fell away afterwards. (*c.*) Good in some waters only.

5.—(*a.*) 1 permanent ; 1 temporary. (*b.*) 224 permanent. Total, 226.

8.—Yes.

12.—One new Factory at Denholme Gate, Bradford, Messrs. the Yeadon Dying Co., prosecuted for polluting Denholme Clough.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Hang or drift net (Public Waters)	1 at	2	10	0	=	2	10	0
Ditto (Public Waters)	5 „	3	0	0	=	15	0	0
Ditto (Public Waters)	1 „	3	10	0	=	3	10	0
Ditto (Public Waters)	4 „	4	0	0	=	16	0	0
Ditto (Public Waters)	2 „	4	10	0	=	9	0	0
Ditto (Public Waters)	1 „	5	0	0	=	5	0	0
Ditto (Public Waters)	2 „	5	0	0	=	10	0	0
Draft or seine net (Private Waters)	23 „	3	0	0	=	69	0	0
Click net (Public Waters)	22 „	1	0	0	=	22	0	0
Rod : for the season	4 „	0	5	0	=	1	0	0
„ for a week								
Total						153	0	0

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Nets	2 at	1	13	4	=	3	6	8
Rod : for the season	13,404 „	0	1	0	=	670	4	0
Total						673	10	8

16 :—

FIRST OFFENCE.

Convictions.—Taking coarse fish during close season, 1 ; fishing for trout with rod and line without a licence, 7 ; groping for trout, 1 ; having a snatch hook in possession on the River Ouse, 1 ; using a snatch hook for the purpose of catching salmon, 3 ; using click net without a licence, 2 ; refusing to allow water bailiff to search boat, 1 ; taking salmon by other means than a properly licensed instrument, 1 ; using illegal instruments, *i.e.*, bank or night lines, 2 ; attempting to take trout with an unlicensed instrument, 1 ; poisoning the Threshfield Beck, 1.

Acquittals.—Having a snatch hook in possession on the River Ouse, 4 ; fishing for salmon during the close season, 1.

Withdrawn on payment of damages, &c.—Causing pollution of Denholme Clough to such an extent as to kill fish, 1 ; polluting Bradford Canal to such an extent as to kill fish, 1.

17.—Efforts are being made to obtain a grant from the Development Commissioners, for the purpose of erecting a fish pass at Naburn Weir below York and of reconstructing the fish pass at Westwick near Ripon.

18.—The Annual Meeting in February, 1914.

ESK (YORKS) DISTRICT.

1.—(*a.*) Above the average. (*b.*) Below the average. (*c.*) About the average.

2.—(*a.*) 7,306 salmon and migratory trout, weighing 34,479½ lbs. (*b.*) 119 salmon, weighing 1,153 lbs.; 98 migratory trout, weighing 450 lbs. Total, 7,523 fish, weighing 36,082½ lbs.

3.—(*a.*) Below the average owing to drought.

4.—Fungus as usual attacked a good many fish when in the river for spawning. Particulars of all dead fish taken from the water by the water bailiffs are given below :—

—		Males.				Females.			
		No.	Weight.	Spawned.	Not Spawned.	No.	Weight.	Spawned.	Not Spawned.
Salmon (S. salar) ...	Diseased ...	33	415	29	4	13	155	11	2
	Not diseased	6	71	—	6	10	114	2	8
Salmon trout (S. trutta).	Diseased ...	7	32	7	—	7	30	7	—
	Not diseased	12	52	10	2	7	28	6	1
Bull trout (S. eriox)	Diseased ...	8	55	8	—	4	20	2	2
	Not diseased	—	—	—	—	4	30	2	2

5.—(*a.*) 2 permanent.

7.—The certified fish-pass at Sleights Dam has been repaired by the Board at a cost of £16 19*s.* 10*d.*

8.—Yes.

13.—The village of Sleights is applying for permission to borrow money for a sewerage scheme, but the work has not started yet. Hinderwell Urban District Council is also considering a sewerage scheme. A contract has been let for works for dealing with sewage at Gothland, but here again the work has not started.

14 :—

FOR SALMON.

		£ s. d.		£ s. d.
Hang or drift net (Public Waters)	41 at	2 10 0	=	102 10 0
Draft or seine net (Private Waters) ...	1 „	2 0 0	=	2 0 0
Rod : for the season	84 „	0 10 0	=	42 0 0
Total				146 10 0

OTHER THAN FOR SALMON.

		£ s. d.		£ s. d.
Rod : for the season	541 at	0 1 6	=	40 11 6

17.—The long drought during most of the 1913 season made the rod-fishing a failure, and also adversely affected the revenue of the Board.

The approaching completion of the harbour extension works at Whitby materially assisted the net fishermen at sea, by enabling them on many occasions to get out to fish under weather conditions that would have prevented them, had the harbour not been improved.

18.—In Whitby in the months of January, April or May, August and November on days fixed by the Commitee.

TEES DISTRICT.

1.—(*a.*) Above the average. (*b.*) Below the average.

3.—(*a.*) There has been an improvement in the trout fishing.

4.—Not to any great extent.

5.—(*a.*) 9 permanent.

13.—Every possible step has been taken to prevent pollution. Yes.

14 :—

FOR SALMON.

			£	s.	d.		£	s.	d.
Hang or drift net (Private Waters)	6	at	5	0	0	=	30	0	0
Ditto (Public Waters)	19	,,	5	0	0	=	95	0	0
Ditto (Public Waters)	5	,,	6	10	0	=	32	10	0
Ditto (Public Waters)	1	,,	7	0	0	=	7	0	0
Ditto (Public Waters)	39	,,	7	10	0	=	292	10	0
Ditto (Public Waters)	4	,,	8	0	0	=	32	0	0
Ditto (Public Waters)	2	,,	8	10	0	=	17	0	0
Ditto (Public Waters)	4	,,	10	0	0	=	40	0	0
Ditto (Public Waters)	1	,,	12	10	0	=	12	10	0
Rod : for the season	132	,,	1	0	0	=	132	0	0
,, for a week	5	,,	0	10	0	=	2	10	0
Total							693	0	0

OTHER THAN FOR SALMON.

			£	s.	d.		£	s.	d.
Rod : for the season	1,835	at	0	2	6	=	229	7	6

16 :—

FIRST OFFENCE.

Convictions.—Being in possession of unseasonable salmon, 4 ; attempting to take salmon, 6 ; disturbing salmon, 3 ; illegally taking trout, 5 ; taking salmon without a licence, 11 ; killing salmon during close season, 5.

Acquittals.—Illegally taking trout, 2.

17.—General pollution by discharge from works and sewage from large towns.

18.—No fixed dates.

WEAR DISTRICT.

1.—(*a.*), (*b.*) and (*c.*) Below the average.

2.—(*a.*) 1,633 salmon, weighing 20,561½ lbs. ; 5,206 migratory trout, weighing 15,618 lbs. Total, 6,839 fish, weighing 36,179½ lbs.

3.—(*a.*) About the average.

4.—The Durham Bailiff reports that he has not during the past 10 years seen so many fish (mostly sea trout) affected by "Fungus" as in 1913.

5.—(*a.*) 1 permanent; 2 temporary. (*b.*) 1 permanent (partly paid). Total, 4.

6.—An apron of cement which was constructed in front of the new fish pass at West Mills Dam, Bishop Auckland was removed by the Urban District Council on their receiving a complaint from the Board.

8.—Yes ; the new fish pass at the West Mills Dam, Bishop Auckland, is now in working order.

10.—No new channels were opened during the year, but the Bishop Auckland Urban District Council have not yet put up gratings at the Head Race of the West Mills Dam.

12.—No ; but pollution from existing mines, &c., continued as before, and proved most detrimental.

13.—With their limited powers the Board were unable to do more than make complaints to those responsible for the pollution when anything unusual occurred.

14 :—

FOR SALMON.

			£	s.	d.		£	s.	d.
Hang or drift net (Public Waters)	21	at	5	0	0	=	105	0	0
Rod : for the season	182	,,	0	5	0	=	45	10	0
Total							150	10	0

OTHER THAN FOR SALMON.

			£	s.	d.		£	s.	d.
Rod : for the season	1,013	at	0	2	0	=	101	6	0

16 :—

First Offence.

Convictions.—Fishing in playground, 2 ; using gaff, 2 ; using snatch, 1

18.—Annual meeting, 4th Friday in May at Sunderland ; quarterly meetings at Sunderland on the 4th Friday in August, the 1st Fridays in November and February.

TYNE DISTRICT.

1.—(*a.*) and (*c.*) Above the average. (*b.*) Below the average.

2.—(*a.*) 16,293 salmon, weighing 264,057 lbs. ; 7,081 migratory trout, weighing 34,999 lbs. Total, 23,374 fish, weighing 299,056 lbs.

3.—(*a.*) Very bad owing to the dry summer. (*d.*) Not regularly fished. (*e.*) Roach and dace decreasing in tideway, increasing in freshwater ; smelt or sparling increasing in tideway.

4.—Yes. 240 fish, all spawned, died affected with fungus disease, viz , 215 male salmon, 8 female salmon, 14 male trout, and 3 female trout ; this was in the months of January, February, and March.

5.—(*a.*) 6 permanent ; 10 temporary. Total, 16.

7.—The existing Fish Pass at Warden Paper Mill Dam on the South Tyne was altered so as to extend further into the river and afford a better lead for the fish.

11.—A new grating was erected at Otterburn Mill in the River Rede to prevent fish being injured by the mill wheel.

13.—An inspection of the estuary of the River Tyne was made by a Committee of the Board accompanied by Mr. C. E. Fryer, one of his Majesty's Superintending Inspectors of Fisheries on the 26th August, 1913, when many dead salmon were seen floating in the river. Samples of water were taken from the river at various places. The matter is still under consideration.

14 :—

For Salmon.

		£	s.	d.		£	s.	d.
Draft or seine net (Private Waters) ...	11 at	5	0	0	=	55	0	0
Ditto (Public Waters) ...	74 „	5	0	0	=	370	0	0
Rod : for the season	104 „	1	0	0	=	104	0	0
„ „	36 „	0	10	0	=	18	0	0
„ „	95 „	0	5	0	=	23	15	0
„ for a week	3 „	0	5	0	=	0	15	0
„ „	1 „	0	2	6	=	0	2	6
„ for a day...	17 „	0	5	0	=	4	5	0
„ „	1 „	0	2	6	=	0	2	6
„ „	5 „	0	1	0	=	0	5	0
General Licences	21	...		...		72	12	0
Total						648	17	0

Other than for Salmon.

		£	s.	d.		£	s.	d.
Rod : for the season	1,116 at	0	2	6	=	139	10	0
„ for a month	814 „	0	1	0	=	40	14	0
General Licence	1		...		...	0	10	0
Total						180	14	0

16 :—

First Offence.

Convictions.—Angling without a licence, 1 ; in possession of young of salmon, 1 ; possession of gaff, 28 ; possession of unseasonable salmon, 1.
Acquittals.—Poisoning trout, 3.

Second Offence.

Convictions —Possession of gaff, 2.

18.—On the second Thursday in March, the third Saturday in May, the second Thursday in October, and the second Thursday in December, at the Moot Hall, Newcastle-upon-Tyne.

COQUET DISTRICT.

1.—(*a.*), (*b.*), and (*c.*) About the average.

3.—(*a.*) Good.

5.—(*a.*) 3 permanent; 2 temporary. (*b.*) 27 temporary. Total, 32.

8.—Yes.

14 :—

FOR SALMON.

		£	s.	d.		£	s.	d.
Hang or drift net (Private Waters)	27 at	1	0	0	=	27	0	0
Ditto (Private Waters)	1 "	4	0	0	=	4	0	0
Ditto (Public Waters)	27 "	4	0	0	=	108	0	0
Rod : for the season	306 "	0	10	0	=	153	0	0
" for a day...	5 "	0	5	0	=	1	5	0
Total						293	5	0

OTHER THAN FOR SALMON.

		£	s.	d.		£	s.	d.
Rod : for the season	650 at	0	2	6	=	81	5	0

16 :—

FIRST OFFENCE.

Convictions.—Using a light, 3; using a gaff, 4; catching salmon during close season, 2; possession of unseasonable salmon, 4; killing unseasonable salmon, 4; using a snatch, 1.

SECOND OFFENCE.

Convictions.—Possession of unseasonable salmon, 1; using a snatch, 2; using a gaff, 2.

18.—April 25th, 1914, White Swan Hotel, Alnwick; July 25th, 1914, Queen's Head Hotel, Rothbury; November 14th, 1914, Sun Hotel, Warkworth; January 30th, 1915, White Swan Hotel, Alnwick.

APPEN

ABSTRACT of ACCOUNTS of the several BOARDS of

District.	Balance in hand 1st Jan., 1913.	Revenue from Salmon Licences and Endorsements.	Revenue from Licences other than for Salmon and Endorsements.	Penalties on Conviction.	Miscellaneous Receipts.	Total Receipts.	Deficit 31st Dec., 1913.
	£	£	£	£	£	£	£
Eden	15	260	138	17	87	737	24
Derwent	—	171	94	—	422	687	1,078
West Cumberland	20	80	63	—	61	172	—
Kent	266	105	257	1	7	446	—
Lune	34	235	190	6	111	641	148
Ribble	11	237	136	3	2	385	12
Dee	255	303	—	8	773	1,380	—
Elwy and Clwyd	173	108	79	1	1	184	—
Conway	40	90	67	—	7	164	—
Seiont	5	88	138	4	38	243	—
Dwyfach	15	30	69	—	5	128	—
Dovey	214	205	107	4	—	317	—
Aeron	13	20	20	—	—	43	—
Teify	—	337	188	80	—	604	87
Cleddy	1	14	30	—	—	46	—
Towy	377	115	340	13	5	875	—
Ogmore	61	1	68	15	3	45	—
Taff and Ely	—	80	—	—	27	108	—
Rhymney	—	—	6	—	20	26	—
Usk	—	489	180	16	1,076	1,776	334
Wye	260	295	899	8	1,948	2,902	—
Severn	883	850	1,053	5	38	2,756	—
Avon, Brue and Parret	173	16	145	1	—	161	—
Taw and Torridge	128	248	151	40	7	612	—
Camel	—	88	49	—	—	137	47
Fowey	—	41	68	—	—	109	15
Tamar and Plym	136	136	100	—	237	559	—
Avon (Devon)	143	40	60	—	18	118	—
Dart	426	205	202	1	113	565	—
Teign	187	174	73	—	3	264	—
Exe	—	278	300	6	281	865	809
Axe	—	38	20	—	—	58	—
Frome	30	84	—	—	1	85	—
Hampshire Rivers	177	266	67	—	—	376	—
Adur	—	—	1	—	—	1	1
Ouse (Sussex)	—	2	—	—	—	2	—
Cuckmere	20	—	9	—	1	10	—
Rother	21	5	19	—	—	24	—
Suffolk and Essex	—	—	—	—	—	—	3
Norfolk	—	—	243	3	3	217	—
Norfolk and Suffolk	—	—	—	—	60	56	—
Ouse and Nene	—	—	—	—	—	—	6
Welland	—	—	—	—	—	—	—
Witham	17	—	2	—	—	2	—
Trent	380	6	180	3	45	340	—
Yorkshire	277	388	670	3	20	881	—
Esk (Yorkshire)	30	140	42	—	11	196	—
Tees	988	350	260	10	38	1,027	—
Wear	360	150	113	8	11	284	—
Tyne	368	640	172	16	127	975	46
Coquet	30	304	82	30	66	445	—
Total	6,540	9,888	6,797	244	5,640	31,919	2,395

* Licences for Trout and Char only except in cases of Lune, Wye, and Severn Districts where "Freshwater fish" licences were issued.

[a] Including £421, contributions assessed under Derwent Fisheries Provisional Order 1911.

[b] Including £106, contributions under Lune Fisheries Provisional Order, 1909.

[c] Including £82, dividends under fund created under the Birkenhead Corporation Water Act 1907, and £300 paid by the Corporation of Chester as compensation for certain water rights relinquished by the Conservators.

[d] Apart from £88 on deposit account.

[e] Apart from £332 on deposit account.

[f] Including £970, contributions assessed under Usk Fisheries Provisional Order 1908, and £7, dividends on fund created under Swansea Corporation Water Act, 1892.

[g] Including £260, instalments of and interest on loans.

[h] Including £1,280 contributions assessed under Wye Fisheries Provisional Order 1908 and £88, dividends on fund created under Birmingham Corporation Water Act, 1892.

[i] Including £180 in repayment of loan from fund created under the Birmingham Corporation Water Act, 1892.

DIX II.

CONSERVATORS for the year ended 31st December, 1913.

Deficit 1st Jan., 1913.	Salaries, Wages and Travelling Expenses.	Prosecutions and Law Expenses.	Fish Passes and other Works.	Miscellaneous Expenditure.	Total Expenditure.	Balance in hand 31st Dec., 1913.	District.
£	£	£	£	£	£	£	
—	617	33	—	126	776	—	Eden.
509	474	5	604	169	1,252	—	Derwent.
—	146	—	—	28	174	33	West Cumberland.
—	317	10	—	144	471	272	Kent.
—	631	4	119	76	820	—	Lune.
—	413	—	4	81	498	—	Ribble.
—	629	25	519	221	1,394	313	Dee.
—	173	1	—	68	242	115	Elwy and Clwyd.
—	151	—	—	23	174	32	Conway
—	141	—	—	81	222	26	Seiont.
—	128	—	1	14	143	1	Dwyfach.
—	236	13	—	42	291	240	Dovey.
—	35	—	2	5	42	13	Ayron.
31[8]	486	5	—	39	530	—	Teify.
—	61	1	—	7	69	1	Cleddy.
—	743	5	—	121	869	160	Towy.
—	7	15	—	27	49	57	Ogmore.
—	81	5	—	19	105	—	Taff and Ely.
1	15	—	—	5	20	4	Rhymney.
27	1,280	173	—	461[7]	1,913	—	Usk.
—	1,336	41	—	1,560[9]	2,937	524	Wye.
—	1,030	25	10	399	1,464	978	Severn.
—	109	5	—	52	166	167	Avon, Brue and Parret.
—	388	50	4	106	554	198	Taw and Torridge.
69	103	—	—	12	115	—	Camel.
10[13]	124	—	—	14	138	—	Fowey.
—	479	—	—	69	548	169	Tamar and Plym.
—	86	—	—	14	100	160	Avon (Devon).
—	305	15	27	168	515	635	Dart.
—	159	3	—	64	226	118	Teign.
533	406	19	—	220	646	—	Exe.
—	51	—	—	7	58	4	Axe.
—	15	—	—	3	18	76	Frome.
—	244	4	1	61	310	242	Hampshire Rivers.
1	1	—	—	—	1	—	Adur.
—	—	—	—	2	2	—	Ouse (Sussex).
—	—	—	—	7	7	16	Cuckmere.
—	17	—	—	7	24	12	Rother.
9	—	—	—	—	—	—	Suffolk and Essex
—	72	11	—	82	168	152	Norfolk.
—	—	—	—	56	56	—	Norfolk and Suffolk.
5	—	—	—	—	—	—	Ouse and Nene.
—	—	—	—	—	—	—	Welland.
—	—	—	—	—	—	19	Witham.
—	178	2	—	131	311	400	Trent.
—	419	97	—	280	796	777	Yorkshire
—	177	17	—	43	237	30	Esk (Yorkshire).
—	799	2	—	560	1,361	630	Tees.
—	242	2	—	132	378	278	Wear.
—	929	7	—	331	1,267	—	Tyne.
—	322	4	—	117	443	32	Coquet.
1,198	14,746	604	1,291	6,223	22,664	6,792	Total.

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[10] Including £3, dividends on fund created under Ilfracombe Improvement Act, 1900.

[11] Including £25 for salmon licences and £12 for trout licences issued in 1912.

[12] Apart from £136 on deposit account.

[13] Apart from £136 on deposit account.

[14] Including £168, contributions assessed under Exe Fisheries Provisional Order, 1912.

[15] Including £6, dividends on £242 8s. 6d. invested in Consols.

[16] Including £17, dividends on investment in 326 British Oil and Cake Mills 6½ per cent. Preference shares.

[17] Including £21, in respect of amounts owing on 31st December, 1912.

[18] Including £54, dividends on investment in £1,100 India 3 per cent. Stock, and on fund created under Tees Valley Water Works Act, 1899.

[19] Including £92, dividends on investment in £697 North-Eastern Railway Stock 4 per cent. Preference Stock, and on fund created under the Newcastle and Gateshead Water Act, 1894.

[20] Including £10 interest on £300 invested; a sum of £155 is held by the Board in trust for the Kent and Bela Conservators under Section 10 of the Barrow-in-Furness Corporation Act, 1901.

APPENDIX III.

TABLE NO. I. — SUMMARY of the ESTIMATED NUMBER of SALMON FISHERMEN employed, and of the ACTUAL REVENUE from SALMON LICENCES, exclusive of that from Endorsements, in the Years 1898–1913.

Year.	Number of			Revenue from			
	Net Fishermen (estimated).*	Rod Licences Issued.	General Licences.	Nets, &c	Rods.	General Licences.	Total Revenue.
				£	£	£	£
1898	3,120	6,225	60	4,599	2,741	218	7,558
1899	2,830	4,474	45	4,158	2,404	203	8,775
1900	2,660	5,335	48	3,950	2,697	215	8,762
1901	2,750	4,683	45	4,079	2,319	213	6,611
1902	2,625	4,907	47	3,905	2,479	222	6,606
1903	2,685	6,820	47	3,994	3,294	218	7,504
1904	2,753	5,845	47	4,095	3,277	202	7,574
1905	2,955	5,847	54	4,393	3,325	217	7,935
1906	2,770	8,153	50	4,115	3,241	206	7,562
1907	2,832	6,190	51	3,910	3,607	193	7,710
1908	2,770	6,271	59	4,115	3,736	240	8,091
1909	2,863	5,757	84	4,253	4,328	254	8,843
1910	3,011	7,383	61	4,473	4,236	258	8,955
1911	3,120	6,284	61	4,836	3,845	268	8,739
1912	3,198	7,297	72	4,767	4,381	270	9,418
1913	3,100	6,720	66	4,825	4,392	283	9,300

* This is exclusive of men employed by holders of "general licences."

TABLE NO. II.—SUMMARY of the NUMBER of and REVENUE from LICENCES OTHER THAN FOR SALMON† in the Years 1898–1913.

Year.	Number of		Revenue from			
	Rods.	Other Instruments.	Rods.	Other Instruments.	General Licences.	Total.
			£	£	£	£
1898 ...	48,234	172	4,268	91	23	4,382
1899 ...	47,116	177	4,206	74	23	4,303
1900 ...	46,357	136	4,157	61	8	4,224
1901 ...	47,994	131	4,352	84	22	4,438
1902 ...	52,484	157	4,895	70	17	4,982
1903 ...	58,014	209	5,394	69	19	5,482
1904 ...	55,703	272	5,359	87	21	6,487
1906 ...	56,871	235	5,821	71	21	5,713
1906 ...	57,071	282	5,834	75	21	5,930
1907 ...	58,375	267	5,956	65	21	6,042
1908 ...	67,338	198	6,886	62	28	6,976
1909 ...	58,094	200	6,031	69	30	8,130
1910 ...	59,666	123	5,070	68	29	8,167
1911 ...	55,069	131	5,634	82	29	5,726
1912 ...	73,320	133	6,363	59	32	6,454
1913 ...	86,779	243	6,680	98	9	8,787

† All for Trout and Char previous to 1910. In that year and subsequently licences for other Freshwater Fish, issued in certain districts in pursuance of Provisional Orders, are included.

N.B.—The figures for previous years will be found in the corresponding Appendix to the Annual Report for 1907 (Cd 4393).

APPENDIX IV.

LIST of FISHERY DISTRICTS of ENGLAND AND WALES (in Order of Coast from N.W. to N.E.), with the NAMES and ADDRESSES of the CHAIRMEN and CLERKS of the several BOARDS OF CONSERVATORS (corrected to 31st March 1914).

EDEN : *Chairman.*—F. Ponsonby Johnson, Castlesteads, Brampton, Carlisle.
Clerk.—J. B. Slater, Court Square, Carlisle.

DERWENT : *Chairman.*—Rev. Canon Sutton, Bridekirk Vicarage, Cockermouth.
Clerk.—Thos. Rook, Court Buildings, Cockermouth.

WEST CUMBERLAND : *Chairman.*—J. Grice, Kiskin, Bootle, Cumberland.
Clerk.—W. H. Chapman, 42, Lowther Street, Whitehaven.

KENT : *Chairman.*—Col. W. J. A. Baldwin, Dalton-in-Furness.
Clerks.—Messrs. Hart Jackson and Son, Ulverston.

LUNE : *Chairman.*—Edmund Sharpe, Halton Hall, near Lancaster.
Clerk.—J. T. Sanderson, 67, Church Street, Lancaster.

RIBBLE : *Chairman.*—R. A. Tatton, Cuerden Hall, Preston.
Clerk.—T. Reveley, 15, Winckley Street, Preston.

DEE : *Chairman.*—W. Y. Hargreaves, Llan-y-Cefn, Ellesmere, Salop.
Clerk.—Henry Jolliffe, 13, St. John Street, Chester.

ELWY AND CLWYD : *Chairman.*—Col. Cornwallis West, Ruthin Castle, Ruthin.
Clerk.—F. W. Grimsley, Bryn Gohaith, St. Asaph.

CONWAY : *Chairman.*—Major A. E. Priddle, Plasmadoc, Llanrwst.
Clerk.—C. T. Allard, Station Road, Llanrwst.

SEIONT : *Chairman.*—J. E. Greaves, J.P., Glangwna, Carnarvon.
Clerk.—R. Wynn Roberts, Palace Chambers, Carnarvon.

DWYFACH : *Chairman.*—Sir H. J. Ellis Nauney, Bart., Gwynfryn, Criccieth.
Clerk.—David Jones, Masonic Buildings, Portmadoc.

DOVEY : *Chairman.*—G. H. Ellis, Pen-y-Mount, Festiniog.
Clerk.—D. Oswald Davies, Dolgelley.

AYRON : *Chairman.*—Roger Lloyd, Estate Office, Lampeter.
Clerk.—E. Lima Jones, 5, Bridge Street, Aberayron.

TEIFY : *Chairman.*—T. Ll. Williams, The Briars, St. Dogmael's, Cardigan.
Clerk.—H. W. Howell, Bank House, Lampeter.

CLEDDY : *Chairman.*—J. C. Yorke, Langton, Dwrbach, Pembroke.
Clerk.—R. T. P. Williams, 12, High Street, Haverfordwest.

TOWY : *Chairman.*—Col. T. Lloyd Harries, Llwyndewi, Llangadock.
Clerk.—C. H. Morgan Griffiths, St. Mary Street, Carmarthen.

OGMORE : *Chairman.*—J. I. D. Nicholl, Merthyr Mawr House, Bridgend.
Clerk.—S. H. Stockwood, Bridgend.

TAFF AND ELY : *Chairman.*—Col. H. Lewis, Greenmeadow, Tongwynlais, Cardiff.
Clerk.—Arthur Waldron, 17, Church Street, Cardiff.

RHYMNEY : *Chairman.*—L. Forestier Walker, Park House, Rhiwderin, Newport.
Clerk.—Horace S. Lyne, Westgate Chambers, Newport, Mon.

USK : *Chairman.*—Sir Shirley H. Salt, Bt., Gliffaes, Crickhowell.
Clerk.—Horace S. Lyne, Westgate Chambers, Newport, Mon.

WYE : *Chairman.*—Sir E. Stafford Howard, K.C.B., 11, Lowndes Square, London, S.W.
Clerk.—R. H. Morant, 46, Commercial Street, Hereford.

SEVERN : *Chairman.*—J. W. Willis Bund, Wick Episcopi, Worcester.
Clerk.—J. Stallard, 3, Pierpoint Street, Worcester.

AVON, BRUE AND PARRET : *Chairman.*—R. Neville Grenville, Butleigh Court, Glastonbury.
Clerk.—T. Foster Barham, Castle Street, Bridgwater.

TAW AND TORRIDGE : *Chairman.*—J. M. Pope, Coplestone House, Copplestone, North Devon.
Clerk.—R. E. C. Balsdon, 109, Boutport Street, Barnstaple.

CAMEL : *Chairman.*—Dr. Christopher Childs, Boscarn, Looe, Cornwall.
Clerk.—G. L. Ellis, Wadebridge.

FOWEY : *Chairman.*—G. P. N. Glencross, Grsenbank, Liskeard.
Clerk.—W. Pease, Lostwithiel.

TAMAR AND PLYM : *Chairman.*—Capt. R. C. Coode, Polapit Tamar, Launceston.
Clerk.—W. W. Mathews, Tavistock.

AVON (Devon) : *Chairman.*—Rev. J. T. B. Notley, Diptford Rectory, South Brent.
Clerk.—W. Beer, Kingsbridge.

DART : *Chairman.*—Chas. Barran, Berry House, Totnes.
Clerk.—Edward Windeatt, Totnes.

TEIGN : *Chairman.*—Lord Clifford, Ughrooke Park, Chudleigh.
Clerks.—Messrs. Hacker and Michelmore, 19, Market Street, Newton Abbot.

EXE : *Chairman.*—T. C. Daniel, Stuokeridge, Bampton, Devon.
Clerk.—H. Ford, 25, Southernhay, Exeter.

OTTER : *Chairman.*—
Clerk.—

AXE : *Chairman.*—W. H. B. Knight, Hilary House, Axminster.
Clerk.—W. G. Forward, The Elms, Axminster.

FROME : *Chairman.*—G. D. Bond, Holme, Wareham.
Clerk.—P. E. L. Bndge, Wareham.

HAMPSHIRE RIVERS : *Chairman.*—John D. Mills, Bisterne, near Ringwood.
Clerk.—C. J. Haydon, Westover Chambers, Bournemouth

ADUR : *Chairman.*—W. F. Booth, 3, D'Avigdor Road, Hove.
Clerk.—E. Woods Oxborrow, 114, Queen's Road, Brighton.

OUSE (Sussex) : *Chairman.*—H. King, Isfield Place, Isfield, Sussex.
Clerk.—F. Holman, 86, High Street, Lewes.

OUCKMERE : *Chairman.*—A. J. Howard, Lessingham, Meads, Eastbourne.
Clerk.—H. J Woodhams, Alfriston, Berwick Station, Sussex.

ROTHER : *Chairman.*—H. C. Burra, Springfield, Playden, Rye.
Clerk.—T. J. Smith, Flushing House, Market Street, Rye.

SUFFOLK AND ESSEX : *Chairman.*—Capt. E. G. Pretyman, M.P., Orwell Park, Ipswich.
Clerk.—A. Townshend Cobbold, County Hall, Ipswich.

NORFOLK : *Chairman.*—John Cator, M.P., Woodbastwick Hall, Norwich.
Clerk.—A. J. Rudd, 54, London Street, Norwich.

NORFOLK AND SUFFOLK : *Chairman.*—G. M. Chamberlin, St. Catherine's Close, Norwich.
Clerk.—H. Brittain, 83, Newmarket Road, Norwich.

OUSE AND NENE : *Chairman.*—The Earl of Sandwich, Hinchingbrooke, Hunts.
Clerk.—Joseph Miller, De Parys Avenue, Bedford.

WELLAND : *Chairman.*—Lt.-Col. C. I. Strong, Thorpe Hall, Peterborough.
Clerk.—S. B. Sharpe, The Park, Market Deeping.

WITHAM : *Chairman.*—Joseph Clark, Skirbeck Road, Boston.
Clerks.—Joseph Dnrance, 6, Free School Lane, Lincoln, and Henry Snaith, 11, New Street, Boston.

TRENT : *Chairman.*—Henry Anson-Horton, Catton Hall, Burton-on-Trent.
Clerk.—C. K. Eddowes, 34, Irongate, Derby.

YORKSHIRE : *Chairman.*—The Earl of Harewood, Harewood House, Leeds.
Clerk.—J. E. Jones, 1, Market Street, York.

ESK (Yorks) : *Chairman.*—Wm. Seaton Gray, Flowergate, Whitby.
Clerk.—W. Brown, The Sawmills, Whitby.

TEES : *Chairman.*—Lord Barnard, Raby Castle, Darlington.
Clerk.—T. M. Barron, 6, Church Row, Darlington.

WEAR : *Chairman.*—Col. T. C. McKenzie, The Cedars, Sunderland.
Clerk.—Wm. E. Raine, 48, Frederick Street, Sunderland.

TYNE : *Chairman.*—Thos. Taylor, Chipchase Castle, Wark, Northumberland.
Clerk.—Jasper Gibson, York Bank Chambers, Hexham.

COQUET : *Chairman.*—Wm. Orde, Nunnykirk, Morpeth.
Clerk.—C. Percy, Alnwick.

APPENDIX V.

Close Seasons for Salmon (*all dates inclusive*).

List showing the Annual Close Season for Salmon, the Weekly Close Season, and the Period locally fixed for the Use of a Gaff as auxiliary to angling with rod and line in each Fishery District on the 31st March, 1914. [The figures in *italics* within brackets show the year in which the Byelaws fixing those periods respectively came into force.]*

N.B.—The Statutory Annual Close Season in England and Wales is: For Nets, &c., from 1st September to 1st February; for Rods, from 2nd November to 1st February.

The Statutory Annual Close Season for Putts and Putchers is from 1st September to 1st May.

The Statutory Weekly Close Season (which does not apply to Rods or to Putts and Putchers) is from noon Saturday to 6 a.m. Monday.

Except as otherwise indicated below, such Close Seasons are in force and the use of the Gaff as auxiliary to rod and line is legal throughout the angling season.

Eden.—**Nets, &c.** :—(*1883.*)—In Solway below Old Sandsfield: 10 Sept.–10 Feb. **Rods** :—(*1908.*)—Except in Eden above Irthing Foot and in Eamont: 16 Nov.–15 Feb. **Weekly** :—(*1882.*)—In public or common waters, and thence to North British Railway Bridge: 6 a.m. Saturday to midnight Sunday. **Gaff** :—(*1884.*)—1 July–15 Nov.

Derwent.—**Nets, &c.** :—(*1884.*)—15 Sept.–10 Mar. **Rods** :—(*1884.*)—15 Nov.–10 Mar. **Weekly** :—(*1884.*)—Noon Saturday to noon Monday. **Gaff** :—(*1884.*)—1 July–14 Nov.

West Cumberland.—**Nets, &c.** :—(*1880.*)—15 Sept.–31 Mar. **Rods** :—(*1882.*)—14 Nov.–10 Mar. **Weekly** :—(*1905.*)—Noon Saturday to noon Monday. **Gaff** :—(*1895.*)—1 July–13 Nov.

Kent, &c.—**Nets, &c.** :—(*1888.*)—15 Sept.–31 Mar. **Rods** :—(*1907.*)—1 Nov.–31 Mar. **Gaff** :—(*1874.*)—2 June–31 Oct.

Lune.—**Nets, &c.** :—(*1908.*)—In Lune and tributaries above the Aqueduct, Lancaster: 12 Aug.–15 July. Rest of District :—1 Sept.–1 Mar. **Rods** :—(*1898.*)—2 Nov.–1 Mar. **Weekly** :—(*1875.*)—6 a.m. Saturday to 6 a.m. Monday.

Ribble.—**Nets, &c.** :—(*1896.*)—1 Sept.–1 Mar. **Rods** :—(*1898.*)—2 Nov.–1 Mar. **Weekly** :—(*1874.*)—6 a.m. Saturday to 6 a.m. Monday. **Gaff** :—(*1874.*)—1 May–1 Nov.

Dee.—**Nets, &c.** :—(*1880.*)—1 Sept.–31 Mar. **Rods** :—(*1913.*)—14 Oct.–31 Mar. **Weekly** :—(*1874.*)—Below Chester Weir: Midnight Friday to midnight Sunday. Above Chester Weir: Noon Saturday to noon Monday. **Gaff** :—(*1913.*)—1 April–30 Sept.

Elwy and Clwyd.—**Nets, &c.** :—(*1874.*)—15 Sept.–15 May. **Rods** :—(*1874.*)—15 Nov.–15 May.

Conway.—**Nets, &c.** :—(*1905.*)—1 Sept.–30 April. **Rods** :—(*1905.*)—1 Nov.–30 April. **Gaff** :—(*1874.*)—1 May–31 Oct.

Seiont.—**Nets, &c.** :—(*1903.*)—1 Sept.–1 Mar. **Rods** :—(*1903.*)—1 Nov.–1 Mar.

Dwyfach.—**Nets, &c.** :—(*1878.*)—15 Sept.–1 Mar. **Rods** :—(*1878.*)—15 Nov.–1 Mar.

Dovey.—**Nets, &c.** :—(*1911.*)—1 Sept.–30 April. **Rods** :—(*1911.*)—2 Nov.–30 April. **Weekly** :—(*1911.*)—6 a.m. Saturday to 6 a.m. Monday. **Gaff** :—(*1911.*)—31 May–20 Oct.

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[*] The alterations made from time to time between the passing of the Salmon Fishery Act, 1873, and the 31st March, 1908, are shown in Appendices VI. and VII. to the Annual Report for 1907 (Cd. 4393).

AYRON.—**Rods** :—(*1883.*)—15 Nov.–14 Feb.

TEIFY.—**Nets, &c.** :—(*1913.*)—1 Sept.–15 Feb. **Rods** :—(*1913.*)—2 Nov.–31 Mar. **Weekly** :—(*1913*)—Above Cardigan Bridge : Noon Saturday to noon Monday. **Gaff** :—(*1913*)—15 April–1 Oct.

CLENNY.—**Nets, &c.** :—(*1874.*)—15 Sept.–15 Mar. **Rods** :—(*1880.*)—1 Nov.–1 Feb.

TOWY.—**Nets, &c.** :—(*1899.*)—1 Sept.–1 April. **Rods** :—(*1890.*)—15 Oct.–1 April. **Weekly** :—(*1899.*)—6 a.m. Saturday to 6 a.m. Monday. **Gaff** :—(*1910.*)—1 May–15 Oct.

OGMORE.—**Nets, &c.** :—(*1874.*)—15 Sept.–30 April. **Rods** :—(*1878.*)—15 Nov.–30 April.

TAFF AND ELY.—**Nets, &c.** :—(*1876.*)—31 Aug.–30 April. **Rods** :—(*1878.*)—15 Nov.–30 April. **Weekly** :—(*1876.*)—Noon Saturday to noon Monday. **Gaff** :—(*1876.*)—1 June–1 Nov.

RHYMNEY.—**Nets, &c.** :—(*1879.*)—1 Sept.–1 April. **Rods** :—(*1879.*)—2 Nov.–1 April. **Weekly** :—(*1879.*)—Noon Saturday to noon Monday. **Gaff** :—(*1879.*)—1 May–1 Nov.

USK.—**Nets, &c.** :—(*1899.*)—1 Sept.–1 Mar. **Rods** :—(*1899.*)—2 Nov.–1 Mar. **Weekly** :—(*1873.*)—Noon Saturday to noon Monday. **Gaff** :—(*1912.*)—Main River Usk (excluding tributaries) below Brecon Bridge : 2 Mar.–1 Oct. Rest of District : 2 Mar.–2 Sept.

WYE.—**Nets, &c.** :—(*1909.*)—16 Aug.–1 Feb. **Rods** :—(*1909.*)—16 Oct.–1 Feb. **Putts and Putchers** :—(*1909.*)—16 Aug.–16 April.* **Weekly** :—(*1909.*)—Midnight Friday to midnight Sunday.

SEVERN.—**Nets, &c.** :—(*1913.*)—Above Tewkesbury weir : 1 June–1 Feb. (*1912.*)—Rest of District : 16 Aug.–1 Feb. **Rods** :—(*1903.*)—2 Oct.–1 Feb. **Putts and Putchers** :—(*1912*)—16 Aug.–15 April.†

TAW AND TORRIDGE.—**Nets, &c.** :—(*1903.*)—14 Sept.–30 April. **Rods** :—(*1903.*)—1 Nov.–31 Mar. **Weekly** :—(*1903.*)—Noon Saturday to noon Monday. **Gaff** :—(*1903.*)—1 June–31 Oct.

CAMEL.—**Nets, &c.** :—(*1893.*)—21 Sept.–4 April. **Rods** :—(*1885.*)—1 Dec.–30 April.

FOWEY.—**Nets, &c.** :—(*1885.*)—Below Lostwithiel Bridge : 1 Nov.–4 April. **Rods** :—(*1892.*)—Between Lostwithiel Bridge and St. Winnow Point : 1 Dec.–30 April. Rest of District : 1 Dec.–4 April.

TAMAR AND PLYM.—**Nets, &c.** :—(*1905.*)—1 Sept.–1 Mar. **Rods** :—(*1905.*)—2 Nov.–1 Mar.

AVON (DEVON).—**Nets, &c.** :—(*1889.*)—In the Erme : 30 Sept.–4 April. Rest of District : 30 Sept.–1 May. **Rods** :—(*1889.*)—In the Erme : 30 Nov.–4 April. Rest of District : 30 Nov.–1 May.

DART.—**Nets, &c.** : (*1904.*)—17 Aug.–last day Feb. **Rods** :—(*1904.*)—1 Oct.–last day Feb. **Weekly** :—(*1894.*)—6 a.m. Saturday to 6 a.m. Monday. **Gaff** :—(*1904.*)—1 April–30 Sept.

TEIGN.—**Nets, &c.** :—(*1877.*)—1 Sept.–2 Mar. **Weekly** :—(*1875.*)—6 a.m. Saturday to 6 a.m. Monday. **Gaff** :—(*1891.*)—1 May–1 Sept.

EXE.—**Nets, &c.** :—(*1901.*)—Above line drawn from Woodbury Road Station through the Perch at Turf and thence to west bank of Exe : 1 Sept.–15 April. Rest of District : 1 Sept.–1 Mar. **Rods** :—(*1898.*)—20 Oct.–1 Mar. **Gaff** :—(*1898.*)—15 Mar.–30 Sept.

AXE.—**Nets, &c.** :—(*1874.*)—20 Sept.–30 April. **Rods** :—(*1874.*)—20 Nov.–30 April.

HAMPSHIRE RIVERS—**Nets, &c.** :—(*1907.*)—Westward of line drawn N. & S. through the Needles : 31 July–1 Feb. (*1909.*)—Rest of District : 1 Sept.–14 Feb. **Rods** :—(*1907.*)—Westward of line drawn N. & S. through the Needles : 2 Oct.–1 Feb. (*1911.*)—Rest of District (except in manor of Beaulieu) : 16 Oct.–1 Feb. (*1911.*)—In manor of Beaulieu : 31 Oct.–1 Feb. **Weekly** :—(*1907.*)—Except in Wood Mill Pool : Noon Saturday to noon Monday. In Wood Mill Pool : 6 a.m. Saturday to 6 a.m. Monday.

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* Alteration made in exercise of powers under the Wye Fisheries Provisional Order, 1908.

† Alteration made in exercise of powers under the Severn Fisheries Provisional Order, 1911.

ANUR.—**Nets, &c.** :—(*1898.*)—1 Sept.–2 Feb. **Rods** :—(*1898.*)—1 Oct.–2 Feb.

OUSE (SUSSEX).—**Nets, &c.** :—(*1877.*)—1 Sept.–1 April. **Rods** :—(*1877.*)—1 Nov.–1 April. **Weekly** :—(*1877.*)—6 a.m. Saturday to 6 a.m. Monday.

ROTHER.—**Weekly** :—(*1876.*)—6 a.m. Saturday to 6 a.m. Monday.

STOUR (KENT).—**Nets, &c.** :—(*1867.*)—(Order of Secretary of State)—1 Sept.–1 May. **Rods** :—(*1867.*) — (Order of Secretary of State)—2 Nov.–1 May.

YORKSHIRE.—**Rods** :—(*1877.*)—16 Nov.–last day Feb. **Gaff** :—(*1875.*)—1 May–1 Nov.

ESK (YORKS).—**Weekly** :—(*1891.*)—6 a.m. Saturday to 6 a.m. Monday.

TEES.—**Weekly** :—(*1903.*)—9 a.m. Saturday to 9 a.m. Monday.

WEAR.—**Nets, &c.**:—(*1904.*)—In Wear and tributaries above South Biddick or Biddick Ford: 1 Sept.–1 Mar. **Rods** :—(*1904.*)—In Wear and tributaries above South Biddick or Biddick Ford : 2 Nov.–1 Mar.

COQUET.—**Nets, &c.**:—(*1874.*)—15 Sept.–25 Mar. **Rods** :—(*1884.*)—1 Nov.–31 Jan. **Gaff** :—(*1911.*)—1 May–31 Oct.

APPENDIX VI.

ABSTRACT of BYE-LAWS for the REGULATION of NETTING in force on the 31st March, 1914, with the YEAR of coming into force.*

(*a.*) KINDS OF NETS and the MANNER OF USING the same (not being fixed engines) for taking Salmon ;
(*b.*) MINIMUM MESH OF NETS for Salmon ;
(*c.*) PROHIBITION OF NETTING NEAR THE MOUTHS OF RIVERS ;
(*d.*) Date of any Bye-law PROHIBITING THE USE AT NIGHT OF NETS IN INLAND WATERS, except a Landing Net or a Net for taking Eels ; and
(*e.*) REGULATION OF NETS used for FISH OTHER THAN SALMON in annual and weekly close seasons.

N.B.—Where no Bye-law on the subject is in force the minimum size of mesh of nets for Salmon is two inches.

The Bye-laws under heads (*c*) and (*e*) do not apply to any part of the district where there is a several right of fishery, and those under head (*e*) do not apply to any part of the river where the breadth at low water is greater than six miles.

Eden District.

(*a*) :—**1891.**—Draft or bang nets not to be used above Solway Viaduct or below line drawn from Sark Foot to Burgh Marsh Point. **1898.**—Hang nets prohibited below the Viaduct as far as a line drawn half a mile west of Annan Waterfoot Lighthouse. **1901.**—Draft or bang nets not to be used in the Waver above bridge at Abbey Junction, or in the Wampool above Solway Junction Railway Bridge.

(*b*) :—**1875.**—From 15 May to 15 July, 1¾ in.

Derwent District.

(*d*) :—**1901.**

West Cumberland District.

(*c*) :—**1882.**—Near mouth of River Esk within the area enclosed (1) by an imaginary line extending S. coastwise across the River Esk, from a black post at high-water mark on Drigg Point to a white post on the S. side of the river at high-water mark in the parish of Bootle, the distance between the said posts being 1,550 yards or thereabouts : (2) by a line drawn in a S.W. direction from the last-mentioned post to a black buoy distant 1,300 yards ; (3) by a line drawn from the said black post to a red buoy distant 1,100 yards ; and (4) by a line connecting the two buoys.

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* The alterations made in (*a*) to (*d*) from time to time prior to the 31st March, 1908, are shown in Appendix VIII. to the Annual Report for 1907 (Cd. 4393).

1891.—Within the following straight lines: (1) true S.W for 1,500 yards from the lamp-post on the up platform, distant 118 ft. from the doorstep of the booking office at Sellafield Railway Station; (2) true S.W. for 1,500 yards from the 12th mile post on the railway from Whitehaven; (3) joining the extremities of such lines.

(*d*) :—**1905.**

Kent, &c. District.

(*c*) :—**1911.**—In Duddon and Estuary between mouth of Lickle at its confluence with Duddon and a line drawn straight across the Duddon from the red brick cottage of the Furness Railway Company at Hill Road or Under Hill (Cumberland) to the western extremity of Welpster Point in Angerton (Lancashire), such last-named point being indicated by a post painted in black and white stripes and marked "D."

(*d*) :—**1874.**

Lune District.

(*a*) :—**1909.**—Below following lines—(1) true N.W. from the lighthouse at the Dock entrance at Heysham to the boundary of the district; (2) straight from Cockersand Abbey Lighthouse to seaward extremity of Sunderland Point; (3) true S.W. from the Chapter House at Cockersand Abbey to the opposite coast; and (4) true W.S.W. from landward end of the breakwater at Knott End, drift, hang, or whammel nets, draft or seine nets, and heave or haaf nets. Between line (2) and a line true S.E. from landward end of the breakwater at Basil Point, draft or seine nets and heave or haaf nets. Rest of district, except Lune above Skerton Bridge, heave or haaf nets. Drift, hang, or whammel nets (defined as unarmoured nets consisting of a single sheet or wall of netting measuring when wet not more than three yards in depth and having meshes not less than 2½ inches from knot to knot, or 10 inches round the four sides when wet) shall be shot or paid out from a boat manned by not more than four persons, and one end of the net shall be fastened by a rope to the boat, and the boat and net shall drift with the tide, and any fish that may become enmeshed in the net shall be removed therefrom with the hands only, provided always that no drift, hang, or whammel net shall be used within 200 yards from any part of another drift, hang or whammel net already in use. Draft or seine nets (defined as unarmoured nets, without bags or pockets, consisting of a single sheet or wall of netting having a length when wet of not more than 20 yards, and a depth in the middle of the net when wet of not more than 8 yards nor less than 6 yards) shall be used as follows:—One end of the rope of the net shall be held on the shore or bank, and the net shall be shot or paid out from a boat which shall start from such shore or bank, and return thereto without pause or delay, and the net shall thereupon be drawn into and landed on such shore or bank, and no net shall be shot or paid out from any point within 100 yards from any part of the space on the shore or bank between the point of starting and the point of return of the boat until after the expiration of 15 minutes from the time at which the net is completely drawn in and landed. Heave or haaf nets (defined as nets of single netting, so constructed as to form a bag or purse suspended from a wooden frame, consisting of a heave beam or pole not exceeding 18 feet in length, having at each end an end stick or projecting arm not exceeding 4 feet in length) shall be used by one person standing in the water and supporting or holding the net by means of a pole or stick projecting from the middle of the heave beam, and lifting or scooping any fish that may become enclosed. The meshes of all nets shall be formed of single cord twine line or thread without twist or kink between the knots, and in the case of drift, hang or whammel nets, and draft or seine nets, shall be hung to the head rope in such a manner that the cord twine line or thread shall form an angle of not less than 45 degrees with the head rope.
1910.—No net, except a landing net used as auxiliary to angling with rod and line, to be used above Skerton Wair.*

(*d*) :—**1909.**

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* Bye-law made in exercise of powers under Lune Fisheries Provisional Order, 1909.

Ribble District.

(*a*) :—**1874.**—Draft or drift nets and hang nets, consisting of a single sheet, without armour and kept in motion. Haaf nets not exceeding 6 yards in length.

Dee District.

(*a*) :—**1878.**—Draft, trammel and coracle nets of legal construction and not exceeding 200, 100, and 16 yards in length, respectively. Trammel nets to be used only below a line drawn from Burton Point to Rockcliff Hall, and to consist of not more than three walls placed together, the mesh of centre net being not less than 2¼ inches, and of the outer nets not less than 11 inches. **1889.**—Two trammel nets not to be used within 300 yards of each other.

(*d*) :—**1874.**

(*e*) :—**1904.**—Between sunset and sunrise during the annual close season, and during the whole of the weekly close season no net to be used above a line drawn from Burton Point to Rockcliff Hall, or below the Weir or Causeway across the Dee in Chester.

Elwy and Clwyd District.

(*d*) :—**1874.**

Seiont District.

(*c*) :—**1914.**—Nets prohibited in the area between the following lines (not being a several fishery): (*a*) in a south-westerly direction, straight from the centre of the spire of Christ Church, Carnarvon, and touching the north face of the tower of St. Mary's Church, Carnarvon, until it reaches a point true north of the western end of Aber Ferry House and thence continued true south until it reaches the coast at high water mark; and (*b*) along the north side of the Seiont Road Bridge. Also in the area between the following lines (not being a several fishery): (*a*) in an easterly direction straight from the flagstaff on Belan Fort to the Old Lime Kiln, near Ty Calch; and (*b*) straight from the western extremity of Penrhyn Farm House to the western extremity of Foryd Newydd Farm House, and thence continued true west until it reaches the coast at high water mark on the west side of Foryd Bay near Ty'nyparc.

(*d*) :—**1886.**

(*e*) :—**1903.**—During the weekly close season no net except a trawl net to be used in the Menai Straits between Abermenai and Garth Points. **1913.**—During the annual close season no net other than a trawl net to be used in the Menai Straits, except in an area comprised within the following lines, namely: a line drawn true south from the house called Penrhyn Bach, at the mouth of the River Braint, until it reaches the centre line of the deepwater channel in the said Straits, thence along such centre line until it reaches a line drawn true south from the seaward extremity of the Ferry Causeway at Garth in the County of Anglesey, thence along such last-mentioned line until it reaches the said Causeway.

Dovey District.

(*a*) :—**1911.**—Draft or seine nets (defined as unarmoured nets, without bags or pockets, consisting of a single sheet or wall of netting having a length when wet of not more than 200 yards, and a depth in the middle when wet of not more than 6 yards) used as follows:—One end of the rope of the net shall be held on the shore or bank, and the net shall be shot or paid out from a boat which shall start from such shore or bank, and return thereto without pause or delay, and the net shall thereupon be drawn into and landed on such shore or bank, and no net shall be shot or paid out from any point within 100 yards from any part of the space on the shore or bank between the point of starting and the point of return of the boat until after the expiration of 15 minutes from the time at which the net is completely drawn in and landed.

(*b*) :—**1911.**—2½ in, (above Railway Bridge, near Dovey Junction).

(*c*) :—**1911.**—In the River Artro between the Cambrian Railway Bridge and a line true south-west from the old Custom House, on the north bank, to high water at Mochrae Point, on the south bank; in the Rivers Yscethin and Dysynni, respectively, westward of the Cambrian Railway Bridge, and in the sea above low water mark between certain limits; in the Dovey between the Cambrian Railway Bridge, near Dovey Junction, and a line from a post marked "E" at the northern extremity at high water of the right bank of the River Einion to another post marked "E" on the opposite bank of the Dovey.

(*d*) :—**1911.**

Ayron District.

(*a*) :—**1893.**—Draft, hang and pole nets. Draft or hang nets not to exceed 200 yards in length and 4 yards in depth, and not to be used in area between a certain line drawn at the mouth of the River and the Lower Bridge at Aberayron.

(*b*) :—**1883.**—1½ in.

(*d*) :—**1883.**

Teify District.

(*a*) :—**1913.**—Draft, seine and coracle nets. Draft and seine nets to be unarmoured nets without bags or pockets and to consist of a single sheet or wall of netting measuring when wet not more than 200 yards in length and 6 yards in depth. Nets to be used by holding one end on the shore or bank and shooting the net from a boat starting from and returning without delay to the same shore or bank, the net then to be drawn in. No net to be shot or paid out from any point within 100 yards from any part of the space on the bank between the point of starting and the point of return of the boat until after the expiration of 15 minutes from the time at which the net is completely drawn in and landed. On the seaward side of Cardigan Bar draft or seine nets measuring when wet not more than 300 yards in length may be used. Coracles to be nets without bags or pockets and to consist of a sheet or wall of netting measuring when wet not more than 20 feet in length and 3 feet 9 inches in depth and having attached round its four edges and on one or both sides a sheet or wall of armour measuring when wet not more than 20 feet in length and 2 feet 6 inches in depth and having a mesh of not less than 5½ inches from knot to knot or 22 inches round the four sides when the net is wet. For using net, each end to be fastened by the head rope to a coracle, manned by not more than two men, the coracles to be allowed to drift down stream with the net suspended between them. No net to be used within 200 yards from any other coracle net already in use or no fish to be wilfully scared or driven into the net. Fish to be removed from net with the hands only.

(*d*) :—**1913.**

Cleddy District.

(*b*) :—**1874.**—1½ in.

(*d*) :—**1874.**

Towy District.

(*a*) :—**1905.**—Draft or seine, coracle, wade, and beave, haaf or lamp nets. Coracle nets only to be used above a line across the Towy, true north from a signal post on Great Western Railway, 241¼ miles from London, and draft or seine nets only between that line and another line across the river from St. Ishmael's Church to Wbarley Point.

(*b*) :—**1885.**—1½ in.

(*d*) :—**1904.**—(Above confluence of Whitemill Brook with Towy only.)

Ogmore District.

(*a*) :—**1874.**—Draft nets not exceeding 200 yards.

(*b*) :—**1874.**—1½ in.

(*d*) :—**1874.**

Taff and Ely District.

(*a*) :—**1876.**—Draft nets not exceeding 200 yards.

(*d*) :—**1876.**

Rhymney District.

(*a*) :—**1879.**—Trammel nets floated by lines and corks at the top and drawn in by such lines.

(*b*) :—**1879.**—1½ in.

(*d*) :—**1879.**

Usk District.

(*a*) :—**1911.**—No net, except a landing net used as auxiliary to angling with rod and line, to be used above lower side of Newbridge Bridge.* **1914.**—Northward of a line drawn in a S. 79° W. true direction from Goldcliff to the shore of the Bristol Channel E. of Peterstone-Wentloog Church, beating nets are allowed, consisting of a single sheet or wall of netting measuring when wet not more than 80 yards in length and not more than 8 yards in depth, and having attached round its four edges on one or both sides an outer sheet or wall of armour or out-holes consisting of netting having meshes of not less than 11 inches from knot to knot or 44 inches round the four sides when wet, and measuring when wet not more than 80 yards in length, and not more than 8 yards in depth. The nets to be extended from a point at or near one bank of the river to another point at or near the same bank, and by driving therein the fish which may have been thereby enclosed. Southward of the aforesaid line, trammel nets are allowed without bags or pockets consisting of a sheet or wall of netting measuring when wet not more than 100 yards in length and not more than 8 yards in depth and having attached round its four edges and on one or both sides an outer sheet or wall of armour or outholes consisting of netting having meshes not less than 11 inches from knot to knot, or 44 inches round the four sides when wet, and measuring when wet not more than 100 yards in length and not more than 6 yards in depth. The net to be shot or paid out from a boat or between two boats which shall be manned by not more than six persons in all, and one end or both ends of the net as the case may be to be fastened by a rope to the boat or boats which shall be allowed to float or drift with the tide, and no fish to be removed from the net otherwise than with the hands only and no trammel net to be used within 200 yards from any part of another trammel net already in use.

(*b*) :—**1874.**—1½ in.

(*d*) :—**1873.**

Wye District.

(*a*) :—**1909.**—No net, except a landing net used as auxiliary to angling with rod and line, to be used above lower side of Brockweir Bridge.† In rest of district, draft or seine nets, tuck nets and lave nets. Draft or seine nets to be unarmoured, without bags or pockets, a single sheet or wall of netting, not more than 200 yards in length and from 6 to 8 yards in depth in the middle when wet; and to be used by holding one end on the shore or bank and shooting the net from a boat starting from and returning without delay to the same shore or bank and then drawing the net in. No net to be shot or paid out from any point within 100 yards from any part of the space on the bank between the point of starting and the point of return of the boat until after the expiration of 15 minutes from the time at which the net is completely drawn in and landed. **1912.**—Tuck nets to be nets without bags or pockets and with or without armour. If unarmoured to consist of a single sheet or wall of netting measuring when wet not more than 100 yards in length and not more than 8 yards in depth, and having a mesh of not less than 2¼ inches from knot to knot, or 9 inches round the four sides measured when wet. If armoured to consist of a single sheet or wall of netting, as above described, having attached round its four edges and on one or both sides a sheet or wall of armour measuring when wet not more than 100 yards in length and not more than 6 yards in depth, and having a mesh of not less than 11 inches from knot to knot or 44 inches round the four sides measured when wet. Each end of a tuck net to be attached to a leaded endstaff or pole. The net to be shot or paid out from a boat, the boat to be fastened to one end of the net by a rope, and the net to be used by floating or drifting with the tide attached to the boat and with or without a second boat attached by a rope to the other end of the net. The boat or boats to be manned by not more than six persons in all, and no fish to be removed from the net otherwise than with the hands or by means of a landing net, and no tuck net to be used within 200 yards from another tuck net already in use. Lave nets to be nets of single netting, constructed so as to form a bag or purse suspended from a wooden frame consisting of a pole or handstaff or handle with two movable arms, each 5 feet 6 inches in length and having not more than 7 feet 6 inches between their outer extremities when fully extended. Each net to be used by one person standing in the water, who shall support or hold it and lift or scoop the fish that may be enclosed therein. No lave net to be used within less than 6 yards from another net.

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* Bye-law made in exercise of powers under Usk Fisheries Provisional Order, 1908.

† Bye-law made in exercise of powers under Wye Fisheries Provisional Order, 1908.

1913.—N.B.—Until the end of the fishing season of 1917, tuck nets measuring when wet more than 100 yards but not more than 400 yards in length may be used in that part of the district which lies below or to the southward of (*a*) a line drawn in a south-easterly direction from the Hen and Chickens Light, near Beachley, to Aust Cliff, or (*b*) a line drawn in a north-westerly direction across the River Wye from Hewens' Rock, near Beachley.

(*b*) :—**1909.**—2¼ in.

Severn District.

(*a*) :—**1903.**—No nets except draft nets (defined as all nets worked by more than one person at any time and drawn on to the bank to secure the fish), bush nets (defined as all nets worked by more than one person at any time and not drawn on to the bank to secure the fish), lave nets and landing nets used as auxiliary to angling with rod and line. Bush nets not to exceed 40 yards in length, and 8 yards in depth, and to be used by extending the net from a point at or near one bank of the river to another point at or near the same bank, and by driving therein any fish which may have been thereby enclosed. Such net shall not be in the water for more than 30 minutes at one time. Below Mountford Bridge and above Gloucester Bridge, draft nets to be used only by attaching each end of the net to a boat and drawing the net until the end of the draft is reached, and then drawing the net on to the land or into one of the boats; or by shooting the net from a boat which shall start from the bank of the river, and proceed across, or partly across, the river, and return to the bank from which it started. Each draft net to be fully drawn in and landed at least 20 minutes before another net is shot or begun to be shot within 100 yards from the point at which the first net is shot or begun to be shot. No draft net to be used in the same draft within 20 minutes after a net has been landed.

(*d*) :—**1903.**—(Except in Severn below Lincombe Weir.)

(*e*) :—**1903.**—During the annual and weekly close seasons all lampern wheels set on or within 20 yards of any weir to be cross-prowed. Between sunset on Saturday and 6 a.m. on Monday during the annual and weekly close seasons no nets to be used for taking shrimps in the estuary of the Severn.

Taw and Torridge District.

(*a*) :—**1903.**—Above a line drawn from the upper light at Braunton through the lifeboat house on Braunton Burrows to a point true North of the Bar Buoy, thence true South until it intersects a line drawn straight from the said light through the building formerly used and now known as the lifeboat house, on Northam Burrows, and thence in a north-easterly direction along such last mentioned line until it reaches the shore at Northam Burrows, draft or seine nets only, unarmoured, consisting of a single sheet or wall of netting, not more than 200 yards in length and 8 in depth. To be used by holding one end of the net on the shore or bank and by shooting the net from a boat starting from and returning without delay to the same shore or bank and then drawing the net ashore.

(*d*) :—**1874.**

Camel District.

(*b*) :—**1893.**—1½ in.

(*c*) :—**1899.**—At confluence of Slades River with River Camel, between a line across the latter at Egloshayle and (*a*) the railway bridge across the Camel at Grogley, and (*b*) the bridge across Slades River at Hingham Mill.

(*d*) :—**1885.**

Fowey District.

(*a*) :—**1885.**—Draft nets only. **1892.**—Unarmoured hang nets of 1½ in. mesh also allowed in portion of district seaward of low water mark, and comprised in Cornwall sea fisheries district.

(*b*) :—**1892.**—In portion seaward of low water mark, and comprised in Cornwall sea fisheries district, 1½ in.

(*c*) :—**1900.**—Between a line drawn across the Fowey true East from a post on the right bank, about 15 yards south of southern extremity of the bridge across the Red or Milltown River on the Lostwithiel and Fowey Railway, and a line drawn across the Fowey along the upper side of Lostwithiel Bridge.

(*d*) :—**1878.**

Tamar and Plym District.

(*a*) :—**1887.**—Draft or seine nets only, not exceeding 200 yards, consisting of a single sheet without armour or walling, and not to be fixed.

(*b*) :—**1878.**—2 in.; but in Plym only, 1½ in.

Avon (Devon) District.

(*b*) :—**1889.**—In tidal waters of Erme, 1½ in. **1893.**—In Avon, below a line from New Quay to Aunemouth Creek, 1½ in.

(*d*) :—**1874.**

Dart District.

(*a*) :—**1904.**—Draft or seine nets only, unarmoured, consisting of a single sheet or wall of netting, not more than 200 yards in length and 9 in depth. To be used by holding one end of the net on the shore or bank and by shooting the net from a boat starting from and returning without delay to the same shore or bank and then drawing the net ashore or into the boat.

(*e*) :—**1904.**—During the annual or weekly close season no nets to be used in the Dart above a line drawn from Duncannon to Ashprington Point, or in the River Harbourne above a line drawn from Bickford Point to Cornworthy Weir. During the weekly close season no draft or seine net to be used above a line drawn from the lighthouse at Teignmouth to Lord Clifford's house at Shaldon. During the annual close season no draft or seine net to be used (1) above the lower side of the Teignmouth and Shaldon Bridge; or (2) within a line drawn from the right bank of the river Teign along the lower side of the said bridge until it reaches the centre of the deepest channel of the river, thence downward along such channel until it reaches a line drawn from the railway signal post near the Club Grounds at Bitton to the Tower in Colonel Graham's grounds, and thence along such line to the right bank of the river; or (3) within a line drawn from the extremity of the lowest jetty at Shaldon, in the direction of the lighthouse at Teignmouth until it reaches the centre of the deepest channel of the river, thence downward along such channel until it reaches a line drawn from such lighthouse to Lord Clifford's house at Shaldon, thence along such line to the right bank of the river

Teign District.

(*a*) :—**1902.**—Above Shaldon bridge, draft or seine nets only. Such nets to be shot from a boat which shall start from the bank and proceed across, or partly across the river, and return to the bank without stoppage or delay. Each net to be fully drawn in and landed at least 10 minutes before another net is shot or begun to be shot within 100 yards from the point at which the first net is shot or begun to be shot.

(*d*) :—**1875.**

Exe District.

(*d*) :—**1879.**

(*e*) :—**1886.**—No nets to be used in the annual close season above a line drawn from the Perch at Turf on one side of the river Exe, to Woodbury Road Station on the other side, nor in the weekly close season above a line drawn from Starcross Pier to Courtlands Beach Gate.

Axe District.

(*a*) :—**1874.**—Draft or seine nets only, with or without armour.

(*b*) :—**1874.**—1½ in.

(*d*) :—**1874.**

Hampshire Rivers District.

(*a*) :—**1907.**—Draft or seine nets only, unarmoured, consisting of a single sheet or wall of netting, not more than 200 yards in length and 8 in depth. To be used by holding one end of the net on the shore or bank and by shooting the net from a boat starting from and returning without delay to the same shore or bank and then drawing the net ashore.

(*c*) :—**1909.**—In the estuary of the Lymington, between the Causeway at Lymington and a line from the mouth of the bunny in the eastern face of the sea wall of John William Lance's marsh to the northernmost end of the gates leading to Admiral Neale's monument; and in the estuary of the Keyhaven or Avonwater, north of a line from the south-east corner of the landing stage at Keyhaven to the south-west corner of Pennington Marsh.

(*d*) :—**1907.**

(*e*) :—**1909.**—During the weekly close season no nets to be used in Avon and Stour, above a line across the Estuary, from the south-east corner of Beacon Lodge to the seaward end of Long Rocks. During annual and weekly close seasons no nets to be used in Itchen, above Cobden Bridge; in Test and Fletch or Bartley Water, above their junction at Horsehead Boom; in Hamble, above Bursledon Bridge; in Lymington, above line drawn straight from Pittsdeep Coast-Guard Station in a south-west direction to "Jack-in-the-Basket" and thence in a north-west direction to south-east corner of Normandy Farm Sea-wall.

Adur District.

(*b*) :—**1898.**—2½ in.

(*c*) :—**1898.**—At mouth of Adur within a distance of 440 yards from the seaward extremities of the E. and W. piers at Shoreham.

(*d*) :—**1898.**

Ouse (Sussex) District.

(*d*) :—**1877.**

(*e*) :—**1877.**—During the annual and weekly close seasons nets not to be used above Southease Bridge with a mesh smaller than that used for salmon.

Cuckmere District.

(*d*) :—**1895.**

Rother District.

(*d*) :—**1876.**

Trent District.

(*d*) :—**1893.**

Yorkshire District.

(*a*) :—**1887.**—Drift nets, draft or seine nets not being armoured, lave nets (including click, hand, bow, and stand nets). Drift and lave nets not to be used except in tidal waters. Each description of net to be used only in the manner in which such net was ordinarily used within the district at the time of the making of this bye-law. Draft or seine nets not to exceed 400 yards in length and to be shot from a coble or boat from a point on the shore or bank of the river to another point on the same shore or bank. Drift nets to be fastened to a boat and allowed to drift or float with the tide. **1897.**—Drift, draft or seine, and lave nets (including click, hand, bow, and stand nets), all unarmoured. Method of using same and length of draft or seine nets to be as laid down in bye-laws of 1887, above.

(*d*) :—**1875.**

Esk (Yorks) District.

(*c*) :—**1895.**—At Whitby within the area enclosed by the following lines:—A line drawn true north from the north east corner of the Royal Hotel; a line drawn true north from the most easterly corner of the East Pier near the Spa Ladder; a line drawn true east and west through a point due north of, and four hundred and fifty feet distant from, the seaward extremity of the West Pier extension; a line drawn straight from the above-mentioned corner of the Royal Hotel to the above-mentioned corner of the East Pier.

Tees District.

(*a*) :—**1893.**—Draft or hang nets only.

(*e*) :—**1888.**—No nets to be used during weekly close season below Stockton Bridge.

Wear District.

(*c*) :—**1902.**—Within the area enclosed by a line drawn from the seaward extremity of the N.E. pier at the S. outlet from the Hudson Dock, Sunderland, true North to a point about 900 yards true East of the seaward extremity of Holey Rock or Ahh's Point, near Roker, thence true West to the seaward extremity of the rock, thence true S. to a point true W. of the seaward extremity of the N.E. pier, and thence true East to where it began.

Tyne District.

(*b*) :—**1891.**—From 1st July to 31st August, 1½ in.

(*c*) :—**1875.**—Within the area enclosed by a line drawn from Sharpness Point to the Trinity buoy coloured red near the end of the north pier at the mouth of the River Tyne, thence to the Trinity buoy coloured black near the end of the south pier at the mouth of the River Tyne, and thence to the Trow rocks.

Coquet District.

(*a*) :—**1874.**—Draft or bang nets only, used with or without a boat by not more than three men.

(*b*) :—**1874.**—1½ in.

(*d*) :—**1874.**

APPENDIX VII.

ANNUAL CLOSE SEASON FOR TROUT AND CHAR.

LIST showing the ANNUAL CLOSE SEASON for TROUT and CHAR in each Fishery District on the 31st March, 1914.

N.B.—The Statutory Annual Close Season for Trout and Char is from 2nd October to 1st February and, except as otherwise indicated below, this Close Season is in force.

EDEN.—Trout :—Nets, 2nd Sept. to last day Feb.; Rods, 2nd Oct. to last day Feb.

DERWENT.—15th Sept. to 10th Mar. Char in Orummock and Buttermere, 1st Nov. to 30th June.

WEST CUMBERLAND.—2nd Sept. to 10th Mar.

KENT, &c.—Duddon and tributaries above Foxbill Viaduct, 2nd Oct. to 1st April. Bela and tributaries, 16th Sept. to 15th Feb. Rest of district, 2nd Oct. to 3rd Mar.

LUNE.—Trout :—2nd Oct. to 1st Mar.

RIBBLE.—2nd Oct. to 1st Mar.

DEE.—Trout :—Rods, 14th Oct. to 14th Feb.

ELWY AND CLWYD.—2nd Oct. to 28th Feb.

OONWAY.—Trout :—1st Oct. to last day Feb.

SEIONT.—Trout :—In Co. Carnarvon, 22nd Sept. to 21st Feb. Rest of district, 22nd Sept. to 13th Feb. Char :—1st Nov. to 1st Mar.

AYRON.—Trout :—1st Oct. to 15th Mar.

TEIFY.—Trout :—1st Oct. to last day Feb.

CLEDDY.—Trout :—29th Sept. to 1st Mar.

TOWY.—In Towy, between Great Western Railway bridge, below Carmarthen, and confluence with Gwili, 2nd Oct. to 30th June. Rest of district, 2nd Oct. to 1st Mar.

Ogmore.—Trout :—30th Sept. to last day Feb.

Taff and Ely.—Trout :—20th Sept. to 1st Feb.

Rhymney.—Trout :—2nd Oct. to 1st Mar.

Usk.—Trout :—In the Cray, Pant-yr-eos and Ynis-y-fro Reservoirs, and the Glyn Ponds, 2nd Oct. to 14th Mar. Rest of district, 2nd Sept. to 14th Feb. By bye law made in exercise of powers under the Usk Fisheries Provisional Order, 1908, fishing is also prohibited in June and July between expiration of first three hours after sunset and last hour before sunrise: and in rest of open season between expiration of first hour after sunset and last hour before sunrise.

Wye.—Trout :—2nd Oct. to 14th Feb.

Severn.—Trout :—2nd Oct. to 1st Mar.

Taw and Torridge.—Trout :—1st Oct. to last day Feb.

Camel.—1st Oct. to 15th Mar.

Fowey.—Between Lostwithiel Bridge and a line drawn from North end of Penquite Wood to St. Winnow Point, 1st Oct. to 30th April. Rest of district, 1st Oct. to 15th Mar.

Tamar and Plym.—2nd Oct. to 1st Mar.

Avon (Devon).—Trout :—1st Oct. to last day Feb.

Dart.—Trout :—1st Oct. to last day Feb.

Teign.—Trout :—1st Oct. to 2nd Mar.

Exe.—Trout :—15th Sept. to last day Feb.

Hampshire Rivers.—In Avon and tributaries above Bickton Mill, 15th Oct. to 15th April.

Adur.—1st Oct. to 31st Mar.

Cuckmere.—1st Oct. to 31st Mar.

Rother.—1st Oct. to 31st Mar.

Suffolk and Essex.—Trout :—2nd Oct. to 10th April.

Norfolk.—Trout :—1st Oct. to last day Feb.

Norfolk and Suffolk.—Trout :—Nets, 10th Sept to 25th Jan.

Ouse and Nene.—Trout :—2nd Oct. to 31st Mar.

Trent.—2nd Oct. to 15th Mar.

Yorkshire.—2nd Oct. to 1st April or Thursday before Easter, whichever comes first.

Esk (Yorks).—Trout :—1st Oct. to 15th Mar.

Tees.—Trout :—1st Oct. to 15th Mar.

Wear.—2nd Oct. to 1st Mar.

Tyne.—1st Oct. to 21st Mar.

Coquet.—Trout :—Rods, 1st Nov. to 3rd Mar.

APPENDIX VIII.

Maintenance of Gratings and Marking of Nets and Boats.

(1.)—Periods during which Gratings are required to be placed by Bye-laws in force on the 31st March, 1914.

Derwent.—From 1st Dec. to 30th June across head races; from 1st Mar. to 31st Dec. across tail races.

Lune.—From 1st Jan. to 31st Dec. across head races; from 1st Mar. to 30th Sept. across tail races.

Dee.—From 31st Oct. to 31st May across head races from 1st Mar. to 31st Dec. across tail races.

Elwy and Clwyd.—From 1st Jan. to 1st June across head races; from 1st July to 1st Dec. across tail races.

Seiont.—From 15th Dec. to 15th June across head races; from 15th May to 15th Nov. across tail races.

Teify.—From 1st Feb. to 30th June across head races; from 1st Sept. to 31st Dec. across tail races.

Usk.—The grating in the mill leat near Millhrook Weir in the Groyney from 15th Nov. to 15th Feb. inclusive. Other gratings across head races in part of district above Lock Bridge, near Brecon, from 15th Nov. to 31st Mar. Below the said Bridge, from 1st Dec. to 15th May.

Wye.—From 1st Dec. to 31st Oct. across head races; from 1st Feb. to 31st Dec. across tail races.

Severn.—From 1st Jan. to 1st June across head races; from 1st Sept. to 31st Dec. across tail races. Where approved gratings are required to be placed across any artificial channel they shall be placed during the whole year. Provided that if two forms of grating are approved, the grating with the widest aperture between the bars shall be placed between the 15th Sept. and the 25th Dec. both inclusive, and the grating with the narrowest aperture shall be placed between the 26th Dec. and the 14th Sept. following, both inclusive.

Camel.—From 1st Jan. to 31st May across head races; from 1st June to 31st Dec. across tail races.

Fowey.—All the year round across head races and tail races.

Teign.—From 1st Jan. to 30th June across head races; from 1st May to 31st Oct. across tail races.

Yorkshire.—From 1st Jan. to 1st June across head races; from 1st Sept. to 31st Jan. across tail races.

Wear.—From 1st Jan to 1st June across head races; from 1st June to 1st Dec. across tail races.

(2.)—DISTRICTS in which BYELAWS were in force on the 31st March, 1914, determining the MARKS, LABELS or NUMBERS to be attached to LICENSED NETS, BOATS, &c. used in fishing:—

Eden.
Derwent.
West Cumberland.
Kent, &c.
Lune.
Ribble.
Dee.
Elwy and Clwyd.
Seiont.
Dovey.
Teify.
Cleddy
Towy.
Rhymney.
Usk.
Wye.
Severn.
Avon, Brue, &c.
Taw and Torridge.
Camel.
Fowey.
Avon (Devon).
Dart.
Teign.
Axe.
Hampshire Rivers.
Adur.
Ouse (Sussex).
Cuckmere.
Rother.
Yorkshire.
Esk (Yorks).
Tees.
Wear.
Tyne.
Coquet.

APPENDIX IX.

ABSTRACT of BYE-LAWS fixing a MINIMUM SIZE at which FISH may be taken, made in pursuance of powers under PROVISIONAL ORDERS, in force on the 31st March, 1914; with the year of coming into force.

Lune.—(1) In Lune Fishery District, taking of salmon or Salmonidæ less than nine inches in length, from tip of snout to fork of tail, prohibited (1911).

(2) In River Lune and its tributaries, taking of non-migratory trout less than seven inches in length, from tip of snout to fork of tail, prohibited (1911).

SEVERN.—(1) In the Severn Fishery District below Lincombe Weir, except that part of the River Teme which lies above Stanford Bridge, the taking of trout and grayling of a less size than nine inches, and bream, roach, dace, and perch of a less size than seven inches from extreme ends of head and tail, is prohibited (1912).

(2) In the Severn Fishery District above Lincombe Weir, and in that portion of the River Teme above Stanford Bridge, the taking of trout of a less size than seven inches from extreme ends of head and tail is prohibited (1912).

(3) In the Severn Fishery District below Lincombe Weir, except that part of the River Teme which lies above Stanford Bridge, the taking of chub of a less size than seven inches from extreme ends of head and tail, is prohibited (1914).

APPENDIX X.

FRESHWATER FISH.—BYE-LAWS.

ABSTRACT of BYE-LAWS under the FRESHWATER FISHERIES ACT, 1884, or under any PROVISIONAL ORDER made under the SALMON AND FRESHWATER FISHERIES ACT, 1907, in force on the 31ST MARCH, 1914.

N.B.—These Bye-laws do not apply to fixed nets for taking eels or to a landing net used as auxiliary to angling with a rod and line.

The Bye-laws prescribing a minimum mesh of nets for taking freshwater fish do not apply to casting or dip nets lawfully used for catching fish for bait. The measurement is to be made from knot to knot, when the net is wet.

DERWENT.—Mesh, 1 inch (except landing nets).

KENT, &c.—All modes or instruments prohibited, except set nets for pike, night lines for taking eels, draft nets, angling with rod and line, fishing for char with the plumb line, fishing with a hand line for perch, setting trimmers for pike, using a landing net as auxiliary to fishing or taking fish with any lawful instrument not being a draft net, and using a dip net for catching bait.

The length, size, and description of nets, except dip nets for catching bait, and landing nets, that may be lawfully used, and the manner of using the same are as follows:—

(*a.*) A floating draft net, which is a draft net buoyed so that the head-rope of the net will float on the surface of the water, shall not exceed ninety yards in length measured along the head-rope, and nine yards in depth from the deepest part of the net to the centre of the head-rope; and the ropes at either end of the net used in working the same shall, respectively, not exceed fifty fathoms in length.

(*b.*) A sunken draft net shall not exceed thirty-five yards in length measured along the head-rope, and six yards in depth from the deepest parts of the net to the centre of the head-rope; and the ropes at either end of the net used in working the same shall, respectively, not exceed one hundred and fifty fathoms in length.

(*c.*) All draft nets shall be used by retaining one end of the net or one end of the hauling rope attached thereto on the shore, and from that point shooting the net into the water as far, but no farther, than the hauling-rope so attached will admit of, the hauling-rope attached to the other end of the net being used to haul the net after being shot to the shore, or to a boat fixed to the shore, such fixed boat to be not more than five yards from the shore.

(*d.*) A dip net for catching bait shall be a circular net of not more than thirteen feet in circumference, and the bag of such net shall not be more than two feet in depth from the outside of the circumference of the net.

Mesh, 1½ inch.

Lune.—All modes or instruments prohibited except rod and line.

Ribble.—Mesh, 2½ inches.

Dovey.—All modes or instruments prohibited except rod and line, eel traps and bobbing for eels.

Teify.—The use of all modes or instruments prohibited, except rod and line, fixed nets for taking eels, and landing nets as auxiliary to fishing with rod and line.

Towy.—The use of any instrument or mode of fishing other than angling with rod and line is prohibited.

Usk.—All modes or instruments prohibited except rod and line, night lines, and beating nets. Beating nets to be shot from one point on the bank to another point on the same bank, and the fish to be driven into the nets with poles; nets to be completely taken out of the water within 15 minutes after commencement of shot.

Mesh, 1 inch.

Severn.—In the Severn between Lincombe and Tewkesbury Weirs and in the River Avon all modes or instruments prohibited except rod and line, night or bank lines, a weir or eel trap, and a wheel or basket for taking eels or lamperns.

In Severn district (except River Severn below Lincombe Weir and except River Avon) all instruments prohibited except draft nets, bush or beating nets, bait nets, weir or eel traps, and night or bank lines.

Nets other than casting or dip nets lawfully used for catching bait not to exceed 40 yards in length and 3 yards in depth.

Bush nets to be used only by extending same from a point at or near one bank of the river to a point at or near the same bank, and by driving therein any fish which may have been thereby enclosed; such net not to be in the water for more than 30 minutes at one time.

Bait nets in the River Severn not to be of greater width or depth than 18 inches.

No night or bank line to be of greater length than 50 yards or to have more than 20 hooks.

[It is provided that none of these bye-laws shall prohibit the taking of fish other than salmon by lawful means in tributaries of the Severn and transferring them from one water to another for the *bona fide* purpose of stocking waters in the Severn Fishery District]

Avon, Brue, &c.—The following modes of fishing are prohibited :—

Lading or baling out part of a brook or water-course, tickling, groping, snaring, snatching, and shooting.

No net shall be used, other than a landing net used as auxiliary to angling with a rod and line, or a fixed net for taking eels, save and except by the special written orders of the conservators.

Taw and Torridge.—All modes or instruments of fishing, except rod and line, prohibited within the following parts of the district, viz. :—

(1) So much of the River Taw as lies above the Bridge on the London and South Western Railway, across the said River between South Molton Road and Portsmouth Arms Stations, together with all tributaries of said river flowing into it above such bridge; (2) the River Mole and its tributaries; and (3) so much of the River Torridge as lies above the bridge across the said river on the high road between Hatherleigh and Iddesleigh, together with all tributaries of the said river flowing into it above such bridge.

[This bye-law does not apply to any pond which is not fed by a tributary stream and the entrance to which from any river is provided with an approved grating; or any hatching, breeding or rearing place for salmon or trout.]

The following modes of fishing are prohibited throughout the district :—

Lading or baling out a hole in a stream, brook, or watercourse, tickling or groping, snatching, snaring, and shooting.

Camel.—Catching or attempting to catch trout by means of night lines, or by baling or lading out pools or holes in any river, or by tickling or groping, is prohibited.

FOWEY.—All modes or instruments of fishing for trout except rod and line are prohibited.

EXE.—All modes or instruments of fishing for freshwater fish except rod and line are prohibited.

AXE.—All modes or instruments of fishing for freshwater fish except rod and line are prohibited.

HAMPSHIRE RIVERS.—In the Avon and tributaries above Bickton Mill stop nets to be used only in connection with a drag or draft net.

ADUR.—The following modes or instruments of fishing are prohibited:—

(*a.*) Lading or haling out a hole in a brook, tickling or groping, snaring, shooting, strodding.

(*b.*) Spear (except for taking eels), night line, cross line, setting rod and line, snare or trimmer, snatch.

(*c.*) Net of any kind, other than a casting or dip net lawfully used for catching fish for bait.

CUCKMERE.—The following modes or instruments of fishing are prohibited:—

(*a.*) Lading or haling out a hole in a brook, tickling or groping, snaring, snatching, shooting, setting rod and line.

(*b.*) Spear (except for taking eels), night line, cross line, snare, snatch.

(*c.*) Net of any kind, other than a casting or dip net lawfully used for catching fish for bait.

ROTHER.—All modes or instruments prohibited except a rod and line, a casting or dip net lawfully used for taking bait, and a spear for eels; provided that between the 15th July and the 1st September in any year nothing in the foregoing shall apply to the Rother between Scot's Float and Knelle's Dam, or to Potman's Creek below Potman's Bridge.

Mesh, 1¼ inch.

SUFFOLK AND ESSEX.—The following modes or instruments of fishing are prohibited:—

(*a.*) Lading or baling out a hole in a brook or watercourse, tickling or groping, snaring, spearing, snatching, shooting, trailing, dragging or ottering, live or dead gorge baiting.

(*b.*) Trimmer, ligger, dead line, night line, spear, snatch, snare, otter.

(*c.*) Any net other than a cast net, not exceeding 20 feet in circumference, or a dip net of a diameter not exceeding 30 inches, lawfully used for catching fish for bait; or hoop or bow net having a mesh of not less than two inches from knot to knot measured when wet.

[These bye-laws do not apply to any wild duck decoy for the time being used as such, or any pond used in connection therewith.]

NORFOLK.—No snare, snatch-wire, ligger, gun, spear (except an eel-spear), or any net to be used for the purpose of taking freshwater fish in any dyke communicating with any navigable river within the counties of Norfolk and Suffolk, within a distance of a quarter of a mile from such river, or in that portion of the River Waveney which lies below Bungay Bridge.

Close time for freshwater fish other than trout, smelts and eels, 15 Mar.–15 June.*

NORFOLK AND SUFFOLK.—No snare, snatch-wire, ligger, gun, spear (except an eel-spear), or any net to be used for the purpose of taking freshwater fish in any dyke communicating with any navigable river within the counties of Norfolk and Suffolk, within a distance of a quarter of a mile from such river, or in that portion of the River Waveney which lies below Bungay Bridge.

[This bye-law does not apply to that part of the county of Suffolk which was included in the Stonr (Suffolk and Essex) Fishery District, as formed under the Provisions of Part III. of the Fisheries Act, 1891.]

OUSE AND NENE.—The use of any net is prohibited, except casting nets used for taking fish for bait, and not exceeding 33 feet in circumference, and not having a pocket more than 6 inches in depth.

The use of any spear, except a spear used only for the purpose of taking eels, or of any trimmer, ligger, dead line, night line, snatch, snare, or other like instrument, is prohibited. Provided that nothing in this bye-law contained shall be held to forbid the use of a rod with a line to which more than one hook is attached.

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* Byelaw made under the Norfolk Fisheries Provisional Order, 1912.

[These bye-laws do not apply to certain specified parts of the district.]

WELLAND.—No net to be used other than casting or dip nets lawfully used for catching fish for bait.

The following modes of fishing are prohibited :—

Lading or haling out a hole in a brook, tickling or groping, snaring, snatching, spearing, shooting, and setting night lines.

WITHAM.—In certain specified parts of the district no net shall be used for catching freshwater fish other than dip or cast nets lawfully used for catching fish for bait, fixed nets for taking eels, or landing nets used as auxiliary to angling with a rod and line, save and except by the special written orders of the Board of Conservators for the purpose of improving the fishery of the district ; and the following modes of fishing are prohibited, namely, lading or haling out a hole in a brook, tickling or groping, snaring, snatching, shooting, spearing or stanging, trailing, dragging or ottering, and setting night lines or trimmers.

TRENT.—No nets except cast nets and dip nets to be used [in certain parts of the district] except by owners of the fishery or other persons by them authorised in writing. No net to be used [in any part of the district] within 50 yards above or below any dam.

The following modes of fishing are prohibited :—

(*a.*) Lading or haling out a hole in a brook, tickling or groping (except by owners of the fishery or other persons by them authorised in writing), snaring, snatching, and shooting [this applies to certain parts of the district only].

(*b.*) Spear (except a spear used solely for the purpose of taking eels), night line, setting rod and line, cross line, wire, snare, or snatch.

YORKSHIRE.—In the River Hull below Foston Mill, the West Beck below Corpse Landing, the Driffield Canal, the Ure below Oxclose, the Ouse, the Swale below Morton Bridge, the Nidd below Cattal Bridge, the Wharfe below Boston Spa, the Wiske, the Foss, and the Derwent below Howe Bridge, all modes or instruments prohibited except rod and line.

WEAR.—All nets prohibited.

APPENDIX XI.

CLOSE SEASON FOR FRESHWATER FISH. (EXEMPTIONS.)

LIST of the FISHERY DISTRICTS which have been EXEMPTED wholly or in part, under the 11th section (sub-section 7) of the FRESHWATER FISHERIES ACT, 1878, from the provisions of the 1st, 2nd, and 3rd sub-sections of that section, which provide a close time for "freshwater fish"* from 15th March to 15th June ; and the KINDS OF "FRESHWATER FISH" to which the EXEMPTION extends (made up to the 31ST MARCH, 1914).

AVON (DEVON).—The whole District ; all kinds.

AXE.—The whole District ; all kinds.

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* NOTE.—For the purposes of the section of the Act above referred to, "freshwater fish" are defined to include all fish (other than pollan, trout and char) which live in fresh water, and do not migrate to and from the open sea. Section 1 of the Act 49 Vict. c. 2 declares that the term "freshwater fish" as thus used "does not include eels, provided that nothing herein contained shall "be deemed to authorize angling for eels during the close season mentioned" above.

EDEN.—The whole District; all kinds.

KENT &c.—The whole District; pike.

SEVERN.—The whole District; pike.
The whole District, except the Severn below the mouth of the Verniew, in the counties of Salop, Stafford, Worcester, and Gloucester, and except so much of the Avon as flows through Worcestershire and Gloucestershire; all, except grayling.

TOWY.—The whole District; all kinds.

USK.—The whole District; eels.

WYE.—The whole District; all kinds.

APPENDIX XII.

NORFOLK AND SUFFOLK FISHERIES.—BYE-LAWS.

ABSTRACT of BYE-LAWS under the NORFOLK AND SUFFOLK FISHERIES ACT, 1877, in force on the 31ST MARCH, 1914, in the WATERS to which that ACT applies.

N.B.—These bye-laws do not apply to any other than freshwater fish, nor (except as specified with respect to smelts) to Breydon Water, nor to the Stour (Suffolk and Essex) Fishery District, formed under the provisions of part III. of the Fisheries Act, 1891. They continue in force (until revoked) in the district created under the Norfolk Fisheries Provisional Order, 1912.

CLOSE TIME—ALL WATERS.

No person shall fish for, otherwise than with rod and line, any trout between the 10th day of September and the 25th day of January, both days inclusive, or any other kind of fish between the 1st day of March and the 30th day of June, both days inclusive, except smelts, bait, and eels, as herein-after provided.

(This byelaw, so far as it relates to the District formed under the Norfolk Fisheries Provisional Order, 1912, is revoked.)

RETURN TO WATER OF FISH IMPROPERLY TAKEN.—ALL WATERS.

Any fish except smelts, eels, or bait taken in any net allowed by the bye-laws to be used for smelts, eels, or bait respectively, shall be immediately returned to the water without avoidable injury.

NETS GENERALLY.

No person shall use or attempt to use

(1.) Any net between one hour after sunset and one hour before sunrise, except in the river Ouse below Denver Sluice, and in the river Nene below Wisbeach Bridge

(2.) For the purpose of taking fish other than tench, smelts, bait, and eels, any net having a mesh of less than 3 inches from knot to knot.

(3.) Any net having a wall or facing with a mesh of less than 7 inches from knot to knot.

(4.) In any navigable river, any bow net or any drag net having a poke or pocket.

(5.) Any net, unless it is sufficiently weighted to sink vertically in the water; or place two or more nets behind or near to each other, or use any other device or artifice so as practically to diminish the size of the mesh of any net.

USE OF TRIMMERS, &C., IN NAVIGABLE RIVERS.

No person shall use any trimmer, ligger, dead line or snare, or any like instrument in any navigable river within the limits of the Act except lines for taking eels as herein-after provided.

DRAG NETS.

No person shall use a drag net of any kind in the under-mentioned waters:—

1. The Rivers Yare or Wensum.
2. The River Waveney.
3. The River Bure below the lower entrance into Wroxham Broad.
4. The River Ant below the lower entrance into Barton Broad.
5. The River Thurne below the entrance into Somerton Broad.

except with the previous permission in writing of the Board of Conservators under their Common Seal.

TAKING SMELTS.

Rivers Yare and Wensum.

No person shall use any net in the rivers Yare or Wensum for the purpose of taking smelts, except a cast net or drop net between the 10th day of March and the 12th day of May, both days inclusive, and then only between the New Mills, in the parish of St. Swithin, in the city of Norwich, or Trowse Bridge, in Trowse, or Trowse Newton, and the junction of the rivers Yare and Wensum at a place known as Trowse Hythe, and between Hardley Cross and the junction of the rivers Yare and Waveney; or any cast net or drop net exceeding 16 feet in diameter.

River Waveney.

No person shall use in the River Waveney, above the Burgh Cement Works, any net for the purpose of taking smelts, except between the 10th day of March and the 12th day of May, both days inclusive, and then only at the places and by the means hereinafter mentioned, viz., between Rose Hall Fleet and the Boat-house Hill, near Beccles, and in the pen of Shipmeadow Lock, by a cast net or drop net not exceeding 16 feet in diameter, and if any such net be used between one hour after sunset and one hour before sunrise, the same shall be used with a light or flare, and not otherwise.

Rivers Ouse, Nar, and Nene.

No person shall take or kill smelts in the rivers Ouse, Nar, or Nene, between the 1st day of April and the 31st day of August, both days inclusive; or use in those rivers for the purpose of taking smelts, any net having a mesh of less than five-eighths of an inch from knot to knot.

Breydon Water.

No person shall use in Breydon Water, for the purpose of taking smelts, any net in the months of May, June, July, and August, or any net between the 1st day of September and the 30th day of April, both days inclusive, having a mesh of less than five-eighths of an inch from knot to knot.

TAKING BAIT.

Navigable Rivers.

No person shall for the purpose of taking bait in any navigable river (except in the River Ouse below Denver Sluice, and in the River Nene below Wisbeach Bridge), use any net other than a cast net, or any cast net having a mesh of less than five-eighths of an inch from knot to knot

All Waters.

No person shall use any cast net exceeding 8 yards in circumference, or having a sack or purse exceeding 14 inches in depth, when extended, for the purpose of taking fish for bait. Provided that cast nets up to 12 yards in circumference may be used from 11th October to 1st April; and the word "bait" shall mean roach, rudd or rond, bream, dace, ruff or pope, gudgeons. and minnows, measuring less than 8 inches from the nose to the fork of the tail.

No person shall net for bait at any time on a Sunday; or at any time on a week-day except between one hour before sunrise and one hour after sunset, nor unless such bait is for use in angling, or trolling, or taking eels within the limits of the Act.

TAKING EELS.

Rivers Yare and Wensum, above Hardley Cross.

No person shall, for the purpose of taking eels in the rivers Yare and Wensum, above Hardley Cross, use

(1.) In the months of April, May, and June, any net; or a line with a hook or hooks, except in connection with a rod used for the purpose of angling.

(2.) At any other time of the year, a line, whether fixed or not, with more than one hook, except in connection with a rod used for the purpose of angling.

(3.) Any net other than a skim or skein net.

All Other Waters.

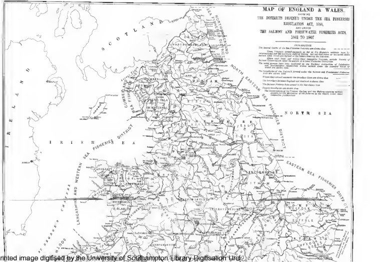
In all other waters lines with one hook only, whether fixed or not, and fixed nets, but no others, may be used at any time for taking eels only.

All Waters.

No person shall use a dag or spear for the purpose of taking fish other than eels.

SUNDAY NETTING—ALL WATERS.

No person shall use any net whatever (except a landing net as auxiliary to angling with rod and line) on a Sunday.


SCOTLAND
IRELAND
IRISH SEA
NORTH SEA
NORTHUMBERLAND SEA FISHERIES DISTRICT
NORTH EASTERN SEA FISHERIES DISTRICT
CUMBERLAND SEA FISHERIES DISTRICT
LANCASHIRE AND WESTERN SEA FISHERIES DISTRICT
EASTERN SEA FISHERIES DISTRICT
ST GEORGE'S CHANNEL
DURHAM
LINCOLNSHIRE
NORFOLK
SUFFOLK
TOWY

MAP OF ENGLAND & WALES

SHOWING

THE DISTRICTS DEFINED UNDER THE SEA FISHERIES REGULATION ACT, 1888,

AND UNDER

THE SALMON AND FRESHWATER FISHERIES ACTS, 1861 TO 1907

EXPLANATION

The lateral limits of the Sea Fisheries Districts are shown thus - - - - -

These Districts extend seawards so far as His Majesty's subjects have by international law the exclusive right of fishing; but not into rivers or estuaries above certain lines which are defined in the Orders creating the Districts.

Above such lines and within their respective Districts, certain Boards of Salmon Conservators have the powers of a Local Fisheries Committee.

The same powers have been conferred on the Harbour Authorities of Colchester and Southampton respectively within certain limits the seaward limits of which are shown thus

The boundaries of the Districts formed under the Salmon and Freshwater Fisheries Acts are shown thus

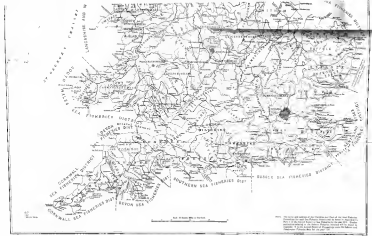
Where they extend seawards the boundary lines are shown thus

The boundary between England and Scotland is shown thus

The Salmon Fishery Acts extend to the line shown thus

County boundaries are shown thus

The Conservators of the Thames, the Lee, and the Medway exercise certain powers for the protection of the fisheries in the waters under their respective jurisdictions


LANCASHIRE AND W
SOUTH WALES SEA FISHERIES DISTRICT
DOVEY
MAWDDACH
GLASLYN
TOWY
WITHAM
SUFFOLK
Bristol Channel
DEVON FISHERIES DIST
WILTSHIRE
CORNWALL SEA FISHERIES DISTRICT
CORNWALL SEA FISHERIES DIST
DEVON SEA FISHERIES
SOUTHERN SEA FISHERIES DIST
SUSSEX SEA FISHERIES DISTRICT
Scale: 10 Statute Miles to One Inch

NOTE. The name and address of the Chairman and Clerk of the Local Fisheries Committee for each Sea Fisheries District will be found in Appendix I to Part I of the Annual Report on Sea Fisheries for the year 1913. Similar particulars relating to the Salmon Fisheries Districts will be found in Appendix V to the Annual Report of Proceedings under the Salmon and Freshwater Fisheries Acts for the year 1913.

Photozincographed at the Ordnance Survey Office, Southampton 1914.